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THE
PHILOSOPHY
OF INTELLECTUAL
EDUCATION.

GEORGE O. CUTLER.

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THE PHILOSOPHY

OF

INTELLECTUAL EDUCATION,

ANCIENT AND MODERN:

AN ESSAY,

BY

GEORGE O. CUTLER, F.R.S.L.,

FELLOW OF THE ETHNOLOGICAL SOCIETY, MEMBER OF THE SOCIETY
OF ARTS, ETC.

LONDON:
SIMPKIN AND MARSHALL, STATIONERS' COURT,
PATERNOSTER ROW.
MDCCCLXII.

~~200. e. 195.~~
260. g. 298.

"As this life is a preparation for eternity, so is Education a preparation for this life; and that Education alone is valuable which answers these great primary objects."

Bishop Short.

BIBLIOTHECA BODLEIANA

PREFACE.

The following treatise is introductory to a larger and more comprehensive work upon the same subject, now in the course of preparation. Though very much that is valuable has already been written respecting Education, there still is abundant room for thought and action in this important sphere. Notwithstanding the efforts that have been made to remove obstacles from the pathway of the teacher, there are yet many difficulties which impede his progress and detract from the success of his exertions. It is the author's object in this essay to suggest means by which some of these difficulties may be overcome; and if any of his suggestions shall be found profitable, in however small a degree, to any of those to whom the education of the young is entrusted, he will be most amply rewarded for his labour.

George O. Cutler.

Broomhill House, Sheffield,
January, 1862.

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THE

PHILOSOPHY OF INTELLECTUAL EDUCATION,

ANCIENT AND MODERN.

PART I.

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1. THE paramount importance and necessity of education for the advancement of the human intellect are almost universally acknowledged. Experience proves that man is capable of becoming a happier, a more useful and a more virtuous being, if his faculties and tendencies be properly fostered and developed, than if they be left to nature's working alone; and education, therefore, from the dawn of civilization to the present day, has not only occupied the attention of parents, but has also been a subject of most interesting inquiry both to the philosopher and the legislator; and all that science and art have been able to devise and money to command has been made tributary to the elucidation of the problem.

2. And yet, if we look at the state of society around us, it is evident that the results obtained are by no means commensurate with the care, energy,

time, and capital bestowed, and that even now we neither all agree as to the ends of education nor know the best means of securing them with certainty. It is true that much valuable fruit has already been gathered from the field of educational enquiry; but that that field is yet far from being so cultivated as to yield a harvest proportionate to the moral and intellectual wants and claims of our age is everywhere among enlightened men a subject of deep and just complaint.

3. The causes of this deficiency may be referred partly to incidental circumstances over which the teacher has no control, and which not unfrequently counteract and paralyse the best-directed endeavours, —and partly to the very limited knowledge we possess of the mental operations: for since we have not yet attained to any just apprehension of the nature of that wonder of wonders, the human mind,—and probably never shall do so,—it follows that the means can never be distinctly ascertained by which its powers and faculties may be brought to their highest state of development.

§ 1. But although a perfect system of education is beyond the reach of finite intelligence, there are nevertheless many causes of imperfection which are not hidden from the view, and which, if judicious measures be adopted, may be overcome. The principal of these causes may be found in the following facts:—

I. *The general idea of education is defective.*

II. *The majority of educators are not the right men in the right place.*

III. *Education is a science of experience.*

IV. *Intellectual education is both ill-understood and badly-conducted.*

With regard to the first two points I must, in order not to overstep the limits of a preliminary essay, confine myself to a few general observations. I shall, however, elucidate the third by a brief review of the history of education, and then enlarge more fully upon the fourth, believing that upon a correct development of our intellectual faculties and their proper direction to such objects as are truly worthy of their regard, our moral life is mainly dependent.

I. *The general idea of education is defective.*

1. It requires no proof that the happiness, usefulness, and virtue of man are not so much the consequence of great attainments in knowledge as of the *equal* and *harmonious* development of his mental, moral, and active nature. That system of education alone is worthy to be adopted which disciplines man as a whole,—his body, mind, and heart,—all of which

have the most intimate relation to each other. Physical discipline alone is but the training of the animal, the formation of an athlete; intellectual discipline alone, but the creation of a theorist; moral discipline alone, little more than the production of a morbid sentimentalist. It is easy enough to account for the phenomena which surround us in society by considering how defective and partial is the training to which multitudes are subjected: for how can the balance be preserved if one part of our nature be cultivated to the prejudice of the others, or if two parts of it be exercised to the neglect of the third? Is not he the most abject of slaves who is a prey to the tyranny of appetite, ease, or lust, and whose body is not in subjection to his mind? Or does he fare much better who, in the mad eagerness to be intellectually great, recklessly and contemptuously ignores the conditions of the tenure of his physical strength, and, consuming his capital without care for the future, falls a victim to disease and not unfrequently to death itself, ere he has gained even the meridian of life? Or what shall we say of him who martyrs his body for the good of his soul, and spurns the exercise of those faculties of mind which God has given to preserve the spirit from self-deception, despotism, and fanaticism?

2. Man is placed in the world to live neither for the body alone nor for his mind alone. Neither the strong and healthy and vigorous man, with a mind as weak and undeveloped as his bodily frame is powerful,—nor the world-famed philosopher who lives, like Thales, among the stars, forgetful of things sublunary,—nor yet once more the religious devotee who spends his days in inactive contemplation, and looks upon his duty to God and his duty to his neighbour and to himself as separate things,—lives up to his position in the scale of created beings. Body, mind, and soul,—each has its own peculiar functions to perform, and *its own capacity for improvement.* And though in this essay I am treating more especially of the education of the intellectual powers of the mind, yet I would not be thought to have lost sight of the necessity of paying a due regard to the proper development of the physical powers, much less of the duty of teaching the young to live not for this world alone, and of leading them to know and to fear and to love Him from Whom alone they have received all that they have now, and to Whom they must look for all that they hope for hereafter.

3. It is quite true that anything like a comprehensive knowledge of religious truth requires a state

of development of the reflective and reasoning faculties of the mind which is not to be found in children,—an activity of those faculties of which they are not capable. But still, as soon as children begin to know almost anything, and to exercise their reasoning powers upon the common objects within their knowledge, so soon may they be taught at any rate so much of religion as is necessary for their age and circumstances. I consider it, therefore, a matter of the highest importance that the teacher should endeavour, looking up for divine assistance, to excite an interest in religion at an early period of life, in order that, when the powers of the mind become more matured, it may be a subject of voluntary study.

4. The Church of England has supplied her children with an invaluable exposition of the fundamental truths of our religion,—a compendium of knowledge and of duty which, in the hands of a judicious parent or teacher who has the real interest of the child at heart, is capable of being used with the most beneficial results. I do not and I cannot approve of the system so frequently adopted of cramming the minds of the young with a mass of maxims, precepts, and doctrinal learning,—knowledge which, since it is far above the level of their intellectual capacity, is totally unintelligible to them, and the

compulsory acquisition of which only tends to make religion altogether distasteful. But I would suggest that a careful and pains-taking course of instruction in the elements of religion, as they are set forth in our Church-Catechism, accompanied by plain and simple explanation, will lay a good foundation of religious faith and knowledge upon which a firm and solid superstructure of religious life may in after-years be reared. It is not enough to teach children the difference between right and wrong merely in a moral or social point of view; it is not enough to teach them to obey their parents, to speak the truth, to act honestly and justly, and kindly, and courteously, merely for moral or social reasons: their consciences are at a very early period capable of receiving conviction when they have neglected or failed in their duty, and they should be further instructed, therefore, in the knowledge of God, and taught that it is He Who made and preserves them, Who gives them all they have, and upon Whom they must depend for all they want,—that they must pray to Him, love Him, honour, worship, and obey Him, for that He sees their every act, hears their every word, knows their every thought, and looks for this grateful return at their hands.

5. The docility of the disposition of childhood is peculiarly favourable to the inculcation of the simple truths of religion; though, so far as I have been able to judge, I am compelled to think that the majority of parents and teachers—even among those who are themselves piously disposed,—take but little pains to convey distinct ideas upon this all-important subject to the minds of those under their care. Why it is so is to me utterly unaccountable; for it is the neglect of an opportunity which occurs but once in a life, and which, if allowed to slip away, can never be recalled.

PART II.

II. *The majority of Educators are not the right men in the right place.*

1. It is at once evident that such an education as I have described will require a higher class of educators, with regard both to mental and moral acquirements, than those who are merely able to communicate knowledge. The great requisite in an educator is the knowledge of human nature, familiarity with the motives, tendencies, and workings of the mind and heart under training. The mysteries of the youthful mind should, therefore, be to such a one an object of close, continued, and practical study and special investigation; for this important knowledge can only be secured by long and careful observation, and the exercise of that invaluable but uncommon virtue, self-command. It is necessary, moreover, that the teacher should possess not only an accurate knowledge of the various subjects included in the educational curriculum, but also a clear and

comprehensive view of those important truths which constitute the basis of religion and morality, and firm and decided notions respecting them. He will thus be enabled to instil into the minds of his pupils those principles and precepts which are the only trustworthy guides along the journey of life; while with respect to general opinions he will exercise care and moderation lest he should communicate a bias which might in any way mislead them or retard their progress. He should also possess a peculiar sympathy with the wants and weaknesses of the young, and a simplicity in imparting his ideas.

2. It is indeed greatly to be feared that there are but few out of the numerous class of those to whom the business of education is entrusted, who are endowed with the qualifications I have enumerated,—indispensable though they are to a right discharge of the duties of instructors. And yet am I requiring too much when I say that the educators of our children should be thus fitted for the all-important task which they undertake? Is the mere possession of a University degree, or even the attainment of high academical distinction, a sufficient proof of a man's suitableness to make a good instructor? It is one thing to have learning; it is quite another to be able to impart that learning; and it by no

means follows that he who has knowledge is capable of teaching it. In fact it not unfrequently happens that men of comparatively speaking limited acquirements are much more able instructors than those with whom, in point of knowledge, they are not for one moment worthy of being compared.

3. Of the necessity of insisting upon the possession of all due moral and intellectual qualifications by those who devote themselves to this most responsible profession, it is impossible to speak too strongly. The impressions received and the opinions formed by us in youth remain with us in a greater or less degree through life. They may be modified, but they are with very great difficulty entirely shaken off. And therefore it is that I say that he who takes upon himself the education of youth takes upon himself a most serious and solemn duty, the difficulties and responsibilities of which are, in this age of the world, for the most part by far too lightly considered.

PART III.

III. *Education is a science of experience.*

1. Every science which is not based upon general and necessary laws or axioms, but, like that of education, upon an induction of facts or upon principles which are derived from experience, cannot be exempt from error, but is ever subject to modification and change according to the different aspects under which it has to be regarded: and thus it is that education has at different times and among different nations always exhibited different phases. And this, from the very nature of the case, must always be so. The situation and climate of a country, the characteristic type and mode of life of its inhabitants, their manners, laws, religious faith and philosophical ideas, and their degree of civilization and enlightenment,—all these are so many conditions which have always given the impulse to education, and have tended to establish its peculiar ends, objects, and aims among the people. The numerous educational systems,

therefore, which have prevailed in by-gone times, are but of theoretical importance; practically they are of minor value; for they were but formed to suit the circumstances of the times; and we have in fact ourselves to do the work of searching out and regulating the ends and means of education amongst ourselves, according to our own experience and attainments in science and in art, and the nature of our moral and religious convictions.

2. This argument will become more evident from the following brief

Review of the History of the Method of Education.

The most ancient nations among which civilization first took up its abode were the Chinese, the Hindus, the Chaldæans, the Jews, and the Egyptians. The historical records of these nations furnish us with many most interesting particulars respecting them. Their language and literature, their religion, their cultivation of science, (*Diod.* I. 6, *and* II. 3), and their discoveries in the same, their observations of natural phenomena, their mathematical and astronomical tables (*La Place: Précis de l' Histoire de l' Astronomie. Paris,* 1821), their inventions and works of art, together with the still subsisting monuments of their architecture and sculpture, all afford us the most convincing evidence that learning, intelligence, and industry, and all that leads to intellectual greatness and social distinction, must have been highly valued and earnestly pursued by them.

§ 1. It must not be supposed, however, that the state of education amongst these nations is to be judged of by their attainments in learning, science, and art; for the nature of their religion, their laws, and especially their egotistical system of castes,—by which (except in the case of the Jews) they were separated into hereditary classes,—prevented the diffusion of the benefits of education among the people at large and their consequent advancement to a higher degree of culture. Thus education failed in producing any extensively-beneficial results amongst them. It was a monopoly of their rulers, princes, and highest castes. It made them learned; but it also rendered them sophistical and speculative thinkers, who praised and pursued wisdom merely as a means of acquiring power and influence, and of administering to their avarice. The upper classes or highest castes, in order to secure a blind and implicit obedience from the lower, debarred them from the benefits which they enjoyed, and consequently we find that among the great mass of the people ignorance, bigotry, and superstition reigned supreme; and the physical and moral character of these nations, therefore, remained as unimproved and as unchanged as the laws and religion from which they received their stamp and colour.

In learning, however, the nations of the East became the teachers of the West; and their literature, especially that of the Chinese and Hindus,—some specimens of which we owe to the labours of European scholars,—is still a study of the greatest interest.

3. Considering in the next place the educational methods of the ancient Persians, Lacedæmonians, and Cretans, which are recorded by Herodotus (I. 136), Strabo (X. 4 *and* XV. 3), Xenophon (*Cyrop.* I. 2), Aristòtle (*Pol.* II. 10), and Plutarch (*Lycurg.* XIV.), we find that the youth among them were, from an early age, removed from their parents' care, and brought up till manhood in public establishments, in which they were taught to use the bow, to ride, wrestle, launch the javelin, and to endure all kinds of hardships and privations, in order to become fitted for the performance of their duties as citizens and soldiers. Their systems of moral and intellectual education were similar in some respects, but differed in others, as the following particulars will shew.

§ 1. The Persian youth, says Herodotus, were brought up in three things alone; horse-riding, the use of the bow, and speaking the truth. Strabo (XV. 3, 18) says the same; but adds that they had the most virtuous preceptors, who interwove in their discourses useful fables, and rehearsed, sometimes with music and sometimes without, the actions of the gods and of illustrious men. This is all that we read in these two authors of the moral training of the Persians: what other statements they contain respecting education refer exclusively to the acquirement of physical activity, hardihood, and courage.

Xenophon, however, has left us further information on this point. He says (*Cyrop.* I. 2, 2) —"Most governments leave each individual to educate his own children as he likes, and permit the advanced in age to live as they please. They enjoin upon their people not to steal, not to plunder, not to enter a house by violence, not to be adulterers, not to disobey the magistrates, and other such things; and the transgression of any one of these precepts entailed a specified punishment upon the offender. But the Persian laws are careful, by anticipation, to provide from the beginning that their citizens shall not be such as to be inclined to any action that is bad or mean. This care they take in the following manner:—the boys attending the public schools pass their time in learning justice, as our boys in learning to read. Their presidents spend the greater part of the day in dispensing justice among them: for there are among the boys, as among those who are men, accusations of theft, violence, deceit, calumny, and other things such as are wont to occur; and such as they convict of doing wrong in any of these respects are subjected to punishment. They punish, likewise, false answers, and whomsoever they find able to return a benefit and not returning it; for they look upon the ungrateful as careless with regard to the gods, their parents, their country, and their friends.........They also teach the boys self-control and obedience, and temperance in eating and drinking."

Such, then, according to Xenophon, was the system of moral culture practised by the Persians. He speaks of it in such high and laudatory terms that he has been accused by some of partiality, by others of too great power of imagination. Be this as it may be, it cannot be denied that such a system as that which he describes must have been peculiarly suitable to a nation which was advancing from the darkness of ignorance to the dawn of civilization.

Of intellectual pursuits none of the authors we have cited makes the slightest mention; and it would appear that to literary accomplishments, even reading and writing, the Persians were altogether strangers;

except perhaps their priests, who probably received some instruction in religion and the laws.

§ 2. The moral education of the Spartans was confined to strict obedience, modesty, and temperance; their intellectual training, to exercises of the judgment, and the acquirement of musical skill; and their physical culture, to the performance of military evolutions. We are informed by Plutarch that as soon as they attained the age of seven they were enrolled, according to the institutions of Lycurgus, in companies, and were all subjected to the same discipline, and had their exercises and recreations in common. He who conducted himself best and evinced the greatest amount of courage was made captain of the company. The members of each company were subservient to their leader's authority, obeyed his orders, and bore with patience the punishments he inflicted. The old men were present at their diversions, and often suggested some occasion of dispute or contention, in order that they might be able to observe with exactness the spirit and temper of each, and his courage in battle.

As for learning, Plutarch adds that they had just what was absolutely necessary and nothing more: *γράμματα μὲν οὖν ἕνεκα τῆς χρείας ἐμάνθανον.* The boys were also required to speak concisely and to the point, and to cultivate a readiness and pithiness of repartee. A portion of their time was set apart for the study of poetry and music; and they were taught to play upon various instruments and to sing songs of a martial character, calculated to stimulate their minds and to excite a passion for distinction in warlike achievements. The education of the Spartans was thus almost exclusively military.

§ 3. That the Cretans did not arrive at a very high standard of virtue appears unquestionable; but still there is no reason to suppose that during the earlier period of life, the period of education, the fundamental principles of morality,—truthfulness, honesty, sobriety, *etc.*,—were not duly inculcated. We do not indeed possess any positive information upon this point; but it is highly improbable that Minos, whose laws and institutions were so celebrated that the Greeks took them as models for themselves, should have omitted that which was absolutely indispensable for the well-being of his system. The germs of virtue, however, will not take root unless they be carefully nurtured; and so we find that the Cretans who, as they grew up to manhood, neglected to observe and practise the maxims and precepts they had been taught in early life, speedily lost the good impressions then received; till at length they became stigmatized as a nation for their untruthfulness, idleness, and greediness. This we may gather from St. Paul's quotation from "one of themselves" (*Tit.* I. 12)—Κρῆτες ἀεὶ ψεῦσται, κακὰ θηρία, γαστέρες ἀργαί; —as also from the old Greek proverb,—τρία κάππα κάκιστα. Καππαδοκία καὶ Κρήτη καὶ Κιλικία.

4. How far these systems of education fall short of what we now consider to be necessary even for the very rudiments of mental and moral culture requires no remark. For taking education, as defined above, to be an harmonious development of the whole man, it is obvious that its aim should be not only to enable him to fulfil his duties as a citizen, but also to bring his intellectual and moral faculties to the highest possible degree of perfection; and it is also equally obvious that the latter end could not be attained by any system which had only the external welfare of the state in view,—its safety, stability, or extension. It cannot be denied that every state must superintend the education of its subjects, so far as its polity requires it; but if a state considers its own external welfare its sole object, as those states did, and avails itself of education merely as an instrument to effect that object, in such case it renders man nothing more than a political machine, and mistakes its high calling, which is not only to secure its own safety or stability,

but also to further in every way the culture and enlightenment of its subjects. The state ought, therefore, not to limit education to one of those ends only, but rather to allow free scope for the advancement of them both.

5. Proceeding to the Greeks, whose laws, excepting those of the Spartans, were not formed for the purpose of regulating the life of the citizen in so particular a manner, but allowed a free development of the individual for his own sake, we observe at once the beneficial results of education. We are told that Solon's laws also claimed the child as belonging to the state, and ordained that it should be educated by, and for, the state: but there was no such uniformity of life amongst the Athenians as amongst the Persians and Spartans; and we may reasonably conclude that, had the children of Athens been educated like those of Persia, Sparta, or Crete, the Athenians would never have attained to such a height of eminence and excellence in everything adorning and accomplishing a human being. This eminence is in a great degree attributable to their education, the results of which, both in literature and in art, will always command the admiration of the world. Mental and physical refinement and polish were with them the first consideration; the useful application of them the

second. A solid practical intelligence, therefore, had less access to their most beautiful ideal world.

It would lead me too far were I to enter into a minute description of all the educational systems of the Greeks. I shall, therefore, content myself with explaining the views of some, who shine forth as stars of the first magnitude.

§ 1. Passing over the names of many celebrated characters, amongst whom are the seven sages of Greece, we come to that of a philosopher of even still greater repute. Pythagoras, the founder of the Western or Italic school of philosophy, was born in the island of Samos, about B.C. 540. We are informed by Diogenes Laertius that he was the first who made use of the term *philosophy* (Φιλοσοφία) and called himself a philosopher (Φιλόσοφος). By this title he intended to imply not that he was already in possession of wisdom, but that he had devoted himself to the pursuit of it. He is said to have first distinguished himself at the Olympic games, at which his physical dexterity, dignity of manners, and brilliant understanding excited the highest admiration.

As the doctrines of Pythagoras were clothed for the most part in emblematical or symbolical language, much difference of opinion has existed among both ancient and modern writers as to their true meaning.

It is, however, generally agreed that his educational system was constructed upon the principle that the end of all philosophy is to free the mind from every thing that may impede its progress in the pursuit of wisdom; and, by raising the soul to the contemplation of divine and spiritual objects, of eternal and immutable truths, to prepare it for a future state. He taught that God is an universal mind diffused through the whole constitution of nature,—the motive principle of all things, of which every human mind is a portion. The human soul he divided into two parts,—the rational or sensitive, and the irrational or ethereal. At death the former perishes, the latter, after passing to the regions of the dead, returns to earth, and becomes again incorporated with man or brute. Elevation and perfection of mind are only to be attained by a long course of training, and by the systematic employment of particular means. The first step to wisdom is to be gained by the study of mathematical science, which tends to control and regulate the mental faculties, and takes a middle course between the material and the immaterial. This science Phythagoras divided into two parts,—viz. numbers and magnitude; the former including arithmetic and music, and the latter comprehending magnitude at rest (Geometry) and magnitude in motion (Astronomy). Numbers he appears to have considered as among the most important subjects of study; but what he understood by the term "number" it is difficult to explain. According to modern writers he held that *number* existed in the Divine mind before the commencement of the work of creation,—that it is the prime cause of the essence of all things, from which all the various properties of matter proceed. After numbers followed music, which he looked upon as a most necessary subject, in as much as, by elevating the mind, it renders it less susceptible to the influences of appetite and passion. He endevoured to reduce music to a science of mathematical principles and proportions, and is said to have discovered the numerical relations of sounds.

To Pythagoras are also to be attributed many important discoveries both in Geometry and Astronomy, the elements of which sciences he learned partly from the Egyptians and partly from the Magi of Persia and Chaldæa. The knowledge, however, of these nations was very imperfect and obscure, and he laboured assiduously to remove the errors and difficulties that existed, and to establish each science upon firmer principles. In those countries he also learned the art of divination, studied mythology and theology, and acquired considerable insight into those sacred mysteries for which Egypt, Persia, and Chaldæa were so famed among the nations of antiquity.

Having spent many years in the pursuit of knowledge, and having made himself thoroughly conversant with the philosophy and literature of the East, Pythagoras returned to Samos, and subsequently settled at Crotona in Magna Græcia, where he founded a public establishment for the general education and moral improvement of the people. He also formed a select club or paternity, which consisted of three hundred members, whom he instructed in religion and philosophy. His pupils were divided into two classes, called respectively ἐξωτερικοὶ and ἐσωτερικοί. The former, who were also termed *auscultantes*, were first subjected to a long course of elementary training; after which, in order that they might become modest, attentive, and reflective, they were required to keep silence for the space of five years. They were then admitted into the latter class, and were termed *genuini, perfecti, mathematici;* and were also designated by the title of Pythagoreans.

Such is a brief exposition of the educational system of Pythagoras; which, though mixed up with much that was erroneous, beyond doubt contributed no little to the moral and intellectual improvement of the age. Let us now pass on to the consideration of the system of teaching adopted by other eminent philosophers.

§ 2. The philosophy of Socrates was essentially of a practical nature. As a teacher, he excelled all who had preceded him both in the ingenuity of his method and the soundness of his instructions. He endeavoured to dispel from the minds of his hearers all injurious prejudices, and to lead them to happiness by correcting their vices and stimulating them with a love of virtue. "He was the first," says Cicero, "that brought philosophy from heaven to earth, and to the public walks and homes of men, that she might instruct them in the art of living." Though Socrates appears to have dedicated the whole of his life to the one business of teaching, even to the exclusion of his profession and all ordinary occupations, yet in as much as he neither delivered formal lectures nor kept a school, we have left behind by him no records of the nature and tendency of the philosophy he inculcated. For these we must betake ourselves to Plato aad Xenophon, his two illustrious friends and hearers,—and more especially perhaps to the *Memorabilia* of the latter, which is without doubt the most genuine representative we possess both of the life and teaching of Socrates. From this source, then, we learn that he considered the true good to consist not in the acquisition of power, honour, or riches, nor in any kind of sensual enjoyment, but in the wisdom which elevates and ennobles the mind. This wisdom, he taught, includes prudence, temperance, justice, and the like; and virtue is the germ from which spring the highest and most enduring pleasures; and he considered that a beautiful mind—*i.e.* a mind pure, virtuous, and well-stored with knowledge,—is more to be admired than a beautiful body. The true philosopher, he said, will not affect the possession of greater knowledge than he has really acquired, or of that which it is beyond his reach to attain. When complimented for his great learning, he invariably replied,—"I only know that I know nothing." With respect to his religious views, he regarded God as an eternal and omnipotent Being, who is the source of all power, wisdom, and goodness,—Who sees everything, hears everything, knows everything, and is everywhere present,—Who regulates and governs the whole universe of nature,—Who controls and directs the affairs of men,—and to Whose laws all things both animate and inanimate are subject. The only true religion he judged to be that which is founded upon implicit obedience to divine precepts; but he held that every one should always conform to the particular mode of worship appointed by the rulers of the state of which he is a citizen. Socrates was fully persuaded that he had a special religious mission, and that he was directed by a guardian-angel (δαίμων) ever-present with him: he was also a firm believer in the immortality of the soul.

The above is a very brief exposition of the opinions of this most celebrated philosopher. "It is interesting," observes a modern writer, "to see how much truth a sincere inquirer might attain, and to what heights of virtue an honest mind could reach; but it is childish in the extreme to deny that, after all, Socrates had but imperfect notions of the character of God, of the relations of man, of the way to happiness, and of the world to come."

§ 3. From the writings of Plato we gather that he believed that the archetypes of our ideas are not in this world,—which was to him only an appearance,—but in the Deity himself, from Whom the mind received them in a former life, and by Whose aid alone we can attain true knowledge. Education formed a chief part of his system of practical philosophy, and the rules and directions which he laid down are worthy of an attentive consideration. His ideal of a state is that of one so constituted and governed that every individual member of it shall receive an education calculated to promote the development of his moral powers and his advancement in virtue, and knowledge he looked upon as useful only so far as it tended to this end. His *Republic* is in point of fact a development of the analogy between the ideas of a perfect man and a perfect state. Commencing with the consideration of virtue, which he defines as the harmonious cultivation of the different intellectual and moral faculties, he analyses the human mind, and divides it into 1. reason, or the rational principle; 2. the will or spirit; 3. appetite or passion;—the will or spirit acting as an intermediate between the first and last named principles, carrying out the dictates of the former, and checking and controlling the latter respectively. For the exercise of these faculties there are three corresponding cardinal virtues: 1. wisdom or prudence; 2. courage or fortitude; 3. temperance or self-control; and to these he adds a fourth, namely justice (δικαιοσύνη), by which is maintained the consistent and proportional development of the inner man, and the performance by each faculty of its functions without interfering with the rest. Indeed this δικαιοσύνη is virtue itself, and he who studies most to promote its influence upon his mind is the most deserving of the character of a perfect man,—μουσικὸς καὶ πολιτικός. Plato then proceeds to work out his notion of a perfect state based upon his idea of a perfect man. A πολίτεια or state, he says, should be a development of a perfect man; and he accordingly separates the members of his state into three classes, corresponding to the three principles into which he had previously divided the mind; viz., 1. the ruling class; 2. the military class; 3. that of the craftsmen: the second class acting, as before, intermediately between the other two, aiding the former and controlling the latter, as the case may be. Education he divides chiefly into two parts, viz., music and gymnastics, that is, mental and bodily training; the term music, as used by Plato, comprising, as is well known, very much more than is now conveyed by the same word: — its meaning is much wider, and includes the sense of the beautiful, the perception of harmony and fitness and proportion in all things. He considered that children should be the common property of the whole community; so that they should stand to each other in the relation of brothers and sisters, and to adults in that of children to parents. He directed that in early life the bodies of children should be specially taken care of, enjoining the necessity of moderate and systematic exercise, and attention in keeping their minds free from everything of a depressing tendency,—holding that the condition of the mind has a powerful influence upon that of the body, and *vice versa.* From the third year control must be exercised over the plays of children: thus the boy who is designed to be an architect must be furnished with the necessary materials, and taught to build miniature houses; and the boy intended for agricultural pursuits must be provided with model implements of husbandry and be instructed in their use and application. "Do not force boys," he says, "to their learning; but train them by means of amusements, so that you may be able to ascertain the direction of their talents." He also recommends mothers and nurses to relate to children fables in which the pleasures of virtue are contrasted in simple but forcible language with the evils of vice, and to endeavour to excite in their minds a love of truth and a sense of honour and shame. Early associations too must be carefully watched and regulated; for that first impressions are the most lasting, and exert a powerful influence, whether for good or for evil, in after-life. Amongst other valuable counsel he enjoins the parents and teachers to use great moderation in the exercise of authority; since children are for the most part susceptible to the gentlest influence, if only it be applied in a proper manner;—and proposes that faults such as idleness and inattention shall be punished by the loss of the good which the child by diligence and perseverance might have acquired. At the beginning of the seventh year, boys and girls are to be separated, and fitted by a suitable education for the performance of their respective duties ; and the eleventh and three following years devoted to reading, writing, and simple exercises of reason. From the fourteenth to the eighteenth year music—or at least Doric and Phrygian music — and gymnastics shall form indispensable branches of education, and special masters shall be provided to teach them: and the study of mathematics he assigns to the same period; considering that the intellectual faculties will be thereby greatly strengthened and improved, and the mind enabled the better to investigate any subject to which its attention may be directed ;—for that a profound knowledge of a few subjects is a more desirable acquisition than a superficial acquintance with many.

Such, then, is a very brief summary of Plato's opinions on education ; and though his ideas of a state are far from being in accordance with our modern principles of the liberty of the subject and freedom of conscience, yet it must be confessed that in the matter of education we are indebted to him for many rules and directions of great value and worthy of attentive consideration.

§ 4. Aristotle, the greatest of Plato's pupils—"the soul of his school," as he was wont to call him, —advanced a step further than his admired master, and maintained that our abstract ideas or universals had purely a subjective existence,—*i. e.* were nothing more than the inductions derived from particular facts —that they re-entered the domain of the senses, and that the objective world was no more a mere appearance, but a being and an essence. His educational theory, of which the following is a short analysis, was based upon the asumption that man was destined for happiness; and he believed, in common with Plato and his followers, that this happiness was only to be found in a life of virtue. He considered virtue to be the mean between opposite qualities. Thus, he described moderation as a quality between ambition and contempt of greatness; courage between rashness and cowardice; politeness between rudeness and servility; modesty between impudence and bashfulness, *etc.* He maintained that education is the only and all-sufficient means whereby the well-being and stability of a state can be preserved, and its advancement promoted; but he differed from Plato in this particular, that he held all other external means for its preservation, maintenance, and extension to be unnecessary. He consequently asserted that the formation and adoption of all such measures as would tend to facilitate and perfect the education of the young are among the most important duties of the legislator, and required that all laws concerning education should be framed in accordance with the particular character or genius of the state itself, so that the citizen should receive an education calculated to promote the good of that particular form of government—whether democratic, oligarchic, or aristocratic—under which he chanced to live. For the first five years of a child's life he held it best to teach him nothing, but merely to accustom him to so much exercise as would prevent an indolent habit of body; and from five to seven he considered that he would be most properly employed in being a spectator of those exercises which he would afterwards have to learn. He required, however, that the eye of his parents and preceptors should be upon his manner of life and upon those with whom he should converse, and that special care should be taken to keep everything indecent or improper from his knowledge: as the Roman satirist centuries later wrote,—"*Nil dictu fœdum visuve ea limina tangat, intra quæ puer est.*" Aristotle divides the periods of education into two parts,—the one from the age of seven to boyhood, the other from boyhood to the age of twenty-one; and the system of education into four parts, viz., reading, gymnastics, music, and painting. Reading and painting, he says, should be taught as being, both of them, of great and various use in life, and gymnastics as tending to produce courage; and music—which bears with Aristotle the same meaning that it does with us, not that in which Plato uses it,—as a means not only of recreation, but of moral improvement; all harmonies too being admitted by him,—the Lydian as well as the Phrygian and Doric,—provided only that they be so selected as to be suited to the hearer. Aristotle is particularly careful to point out the exact positions which mental and bodily training should hold with regard to one another in the education of the young; and instances the Lacedæmonians, whose object had been to make their children fierce by painful labour, to the neglect of the due cultivation of their minds. "What is fair and honourable," he says, "should take the foremost place in education; for it is not a wolf or any other wild beast that will brave any noble danger, but rather a good man: so that they who permit boys to engage too earnestly in these exercises, while they do not take care to instruct them in what it is necessary to do, render them too mean to speak the truth, and accomplished only in one duty of a citizen, but in every other respect good for nothing, as reason evinces." He, moreover, dwells upon the necessity of mind and body labouring at different times; the labour of the body, as he says, preventing the progress of the mind, and that of the mind the progress of the body; and he suggests, therefore, that three years from the time of boyhood should be allotted to the other parts of education, and that they should then be deemed to be of a proper age to submit to labour and a regular diet. It was in conformity with this principle that Aristotle himself encouraged his celebrated pupil, Alexander the Great, to persevere in his bodily exercises until he acquired in them a degree of proficiency which left him without a rival; and afterwards directed the whole bent of his mind to the acquisition of scientific knowledge.

As in the system of education proposed by Plato, there is a spirit of religion pervading the whole (*Rep.* II. 18—21), so we need not doubt that among the numerous works of Aristotle which have not come down to our day, this important subject was treated upon. In fact we may reasonably infer as much from the conclusion of a letter preserved by Plutarch, which was addressed by the philosopher to his royal pupil in the midst of his unparalleled successes; where he reminds him that "they who entertain just notions of the Deity are better entitled to be high-minded than they who subdue kingdoms." It was indeed upon an accusation of impiety that he was summoned before the court of Areopagus: an accusation of which his life as well as his works fully proved the falsehood. He, however, avoided his trial by withdrawing from Athens,—saying, in allusion to the death of Socrates, that he was unwilling to afford the Athenians a second opportunity of sinning against philosophy. He died in banishment about twelve months afterwards, B.C. 321.

§ 5. Soon after the death of Aristotle the liberty and independence of Greece entirely ceased, and education then directed its endeavours to the end of rendering man content in his individual condition, without regard to his position as member of a state. On this principle education was conducted by the Stoics and Epicureans. Zeno, the founder of the former sect, held his school at Athens, in the Stoa Pœcile, and had very numerous followers. The fundamental principle of his philosophy was that the chief good is to live according to nature,—which is, it was said, to live according to virtue, for that nature leads us to this point. But it was not meant by this, that man was to live according to his own individual nature; but that his life should be made conformable to the whole nature of things,—that is, to universal nature. This doctrine his disciples held to be the basis of all morality and philosophy; for that to know man's relation to universal nature is to know at once both what he ought to be and what he ought to do. Though this, in simple terms, was the fundamental doctrine of their system, yet in the exposition of it there was much difference of opinion; nor was its application always practicable. They furthermore maintained that all virtuous and vicious actions are equally virtuous and vicious; and that happiness, which they believed to be wholly dependent upon virtue, is in every man's power to attain. According to their theory the truly wise man possesses all knowledge, and is, therefore, perfect and sufficient in himself; he despises everything which to others is the occasion of annoyance or fear; he feels pain, but is not conquered by it. The good man will do good without sympathy, and execute justice without pity; and he is at liberty to withdraw from life whenever he judges it to be expedient. They also inculcated the total subjugation of the appetites, and the habitual practice of an austere discipline; but nevertheless at a later period their morality became extremely lax, and at length it was permitted to the wise to live and act almost without any restriction. It has been well observed that such a system might do for the imaginary wise man of the Stoics; but that it was not one, the general adoption of which was possible to the existence of any actual society.

§ 6. The Epicureans asserted that pleasure is the "summum bonum," and inculcated the cultivation of everything which might conduce to that end. For pleasure, they said, constitutes happiness; all animals instinctively pursue it, and as instinctively avoid pain. They considered that every pleasure is in itself good, but may result in evil; and in like manner that every pain is essentially evil, but may be productive of good. The philosopher, therefore, must avoid those enjoyments which occasion grief, and endure those pains which may result in pleasure. Bodily suffering was thought to be more tolerable than that of the mind; "for that the flesh is only sensible to present affliction, but the soul feels the past, the present, and the future." By the same mode of reasoning they argued that the pleasures of the soul are greater than those of the body. The Epicurean system of philosophy has been in every age the subject of much misrepresentation and misconception; and even the very name of its illustrious founder has become proverbially applied to everything in human character and conduct that is base, licentious, and grovelling. This is to be explained partly by the fact that shortly after his death many of his followers gave themselves up to mere sensual enjoyment, and partly because the erroneous principle upon which his system was based,—viz., that of making virtue dependent upon subsequent happiness,—was itself imperfectly understood. According to the teaching of the school of Epicurus, virtue was to be followed because she led to happiness—in contradistinction to the teaching of the Stoics, who contended that virtue should be cultivated for her own sake alone, irrespectively of the happiness which such conduct will produce. But an imperfect view of the fundamental principle of the system, and a simple statement that it contained no higher philosophy than that embodied in the proposition that pleasure is the chief good, has led many to the erroneous conclusion that Epicurus not only licensed, but even encouraged, a free and unbridled exercise of appetites and passions,—an unrestrained indulgence in sensual gratifications. That opinions such as these are utterly at variance with the principles he really inculcated, the following extract from a letter of Epicurus himself to Menæceus contains the most convincing testimony. "Wisdom," he says, "is the chief blessing of philosophy, since she gives birth to all other virtues, which unite in teaching us that no man can live happily who does not live wisely, conscientiously, and justly; nor on the other hand can he live wisely, conscientiously, and justly without living happily; for virtue is inseparable from a life of happiness, and a life of happiness is equally inseparable from virtue." When, therefore, pleasure is described by Epicurus and his disciples as "the supreme good," "the prime felicity of man," they do not refer to the pleasures derived from sensual gratifications, but rather to those which arise from the possession of a body strong, healthy, and vigorous, and of a mind in full enjoyment of all its powers, and free from anxiety and perturbation. In fact the ethical theory of the Epicureans will appear to be aptly summed up in the familiar expression,—"Mens sana in corpore sano."

The philosophy of Epicurus, when contrasted with that of the Stoical school, has by far the more favourable aspect; for while that of the former eminently tends to sustain and strengthen the influence of the moral and social affections, that of the latter is evidently calculated to promote ascetic apathy and indifference.

The Sceptical or Pyrrhonian school comprised that class of thinkers who, placing little or no faith in the result of philosophical enquiry, considered usefulness to be the grand aim of life, and, therefore, devoted all their attention to the formation of habits of useful activity. Galen, who belongs to this class, warmly advocates a due regard to physical education, asserting that a regular and systematic exercise of the bodily powers and functions is of the greatest importance to the proper union of the soul and body, and that the cultivation of the former alone would be detrimental to that union.

§ 7. Among the Neo-Platonists, Philo the Jew followed a religio-philosophical system of education. He thought that the senses might convey erroneous impressions,—thus making reason powerless; but he held that there is a faculty in man called "faith," in which real science is centred, and which engenders piety.

6. We have thus taken a brief survey of the opinions of the most eminent promoters of education among the Greeks. To their intelligence and industry all succeeding nations were indebted; and even at the present time their writings on education, as well as on other subjects, may be studied with great advantage; since they contain many ideas on intellectual and moral culture, which assist us materially in our endeavours to construct a system of education adapted to the wants and claims of the age in which

we live,—an age distinguished from theirs both by advanced civilization and by the influence of Christianity. But although we owe so much to these illustrious philosophers, an entire adoption of their educational views and methods would be as undesirable as it would be impracticable. It would make us neither Grecian poets, artists, nor authors; since their eminence was not the result of a technical education only, but is rather to be referred to the influence of their history, their traditions, their social life, their language, laws, and mythology, and their ideas of a future state, none of which we could make our own. Neither would it correspond with our higher aim of education; which is, not only to perfect our youth in the doctrines of the sages of Greece, but also to teach them to fashion their lives according to the precepts of our divine religion.

7. Among the Romans education aimed especially at practical utility. If both Greek and Roman pursued the same subject, each had his own peculiar end in view. The object of the former was almost exclusively restricted to that of promoting refinement and elevation of mind; that of the latter, to the acquirement of some solid and substantial advantage either for his own benefit or for the good of the commonwealth. The Roman, the proud citizen of a free

state, and at a later period the subject of the largest empire which the ancient world ever knew, cared less for æsthetical culture than for a vigorous understanding, and for the maintenance of his personal rights:—his great aim and object was practical efficiency. In these characteristics of the Romans we see the reason why—with but few exceptions—we have received from them no deep philosophical theories, but rather the result of their experience, and the maxims and precepts which they considered the best for individual and social guidance. The discussion of measures for the public good occupied the greatest portion of their time; and the acquirement of eloquence was consequently deemed of primary importance among them. The works of M. Cato on *Oratory* (unfortunately no longer extant, but the tendency of which we know from other writers), of M. Varro on *Education* (also lost) of Cicero, Quintilian, and Seneca, all shew us the great importance attached to the attainment of the art of public speaking.

§ 1. Marcus Porcius Cato, commonly called Cato Censorius, or Censor, and Cato Major, to distinguish him from his descendant Cato Uticensis, was an excellent orator, soldier, and politician We are informed by Plutarch that he acquired so much influence and authority by his eloquence that he was surnamed "the Roman Demosthenes;" and we learn from the same writer that he was even more celebrated for his extreme frugality and temperance and his austere mode of living. "His excellence in Oratory," says Plutarch, "awakened a general emulation among the youth to distinguish themselves in the same manner, and to surpass each other; but few were willing to imitate him in the ancient custom of tilling the field with their own hands, in eating a dinner prepared without fire, and a spare frugal supper; few, like him, could be satisfied with a plain dress and a poor cottage, or think it more honourable not to desire the superfluities of life than to possess them." As Censor (B.C. 184) he was strict and grave, and used his utmost endeavours to check the vice and depravity which at that time were becoming prevalent. He stood, as it were, on the frontier between ancient and modern Rome, and was an enemy to all new ideas and principles. He maintained that only a good man could be an orator; and that a sound understanding, purity of feeling, and rhetorical talent were all necessary to enable a man to become truly eloquent. The "homo elegans" was to him an object of contempt rather than of admiration. He considered a man who occupied his time with poetry an idler, and offered the most strenuous opposition to the introduction of the

Grecian systems of culture. Indeed so great was his antipathy to the polite studies and learning of the Greeks, and so pernicious did he consider them, that he affirmed his belief that if the Roman people came thoroughly to imbibe their literature and philosophy they would lose the empire of the world. "But time," says Plutarch, "has shewn the vanity of that invidious assertion; for Rome never attained a higher pitch of greatness than when she was most perfect in Grecian erudition, and most attentive to all manner of learning." His views with regard to early education may be gathered from the training and discipline to which his son was subjected. According to the same author whom we have cited above, "as soon as the dawn of understanding appeared, Cato took upon himself the office of schoolmaster to his son, and instructed him in grammar, in law, and in the necessary exercises; and taught him not only to throw the dart, to fight hand to hand, and to ride, but to box, to endure heat and cold, and to swim the most rapid rivers. He also wrote histories for him with his own hand in large characters, in order that, without stirring out of his father's house, he might gain a knowledge of the great actions of the ancient Romans, and of the customs of his country. He was as careful not to utter an indecent word before his son as he would have been in the presence of the vestal virgins." We find that the care bestowed by Cato upon his son accomplished the desired end, and that, when he grew up to manhood, he greatly distinguished himself both by his rectitude of conduct as a citizen, and by his skill and bravery as a soldier.

§ 2. M. Varro—styled on account of his varied erudition "the most learned of the Romans,"—attached the greatest importance to a mature education. He divided human life into periods of fifteen years, and considered proper bodily care of the young to be the main object in early life.

§ 3. M. T. Cicero, however, by whom the Roman language was raised to its highest state of perfection, entertained more liberal notions respecting education than either of the above-mentioned writers. Unlike Cato, he warmly advocated the cultivation of poetry and the fine arts; and certainly the skill and ability which he displayed in the management of public affairs were strong proofs that a profound study of the laws, language, and literature of the Greeks was advantageous rather than detrimental to the Roman citizen. He maintained that every individual is entitled to receive such an education as will fit him for the position he is designed to occupy, and that every nation is bound to advance the civilization of mankind.

§ 4. In the time of the Roman Emperors, a public life had fewer attractions and was less desirable on account of the danger attending it; and occupations connected with science and art supplied the want of other employment to the Romans. Among the philosophers who flourished at this period, M. Annæus Seneca, Nero's tutor, and M. Fabius Quintilianus, two of the highest eminence, were both deeply impressed with the necessity of a scientific as well as a moral and practical education.

Seneca, whom Pliny styles "princeps eruditionis," and whom Quintilian praises as a philosopher and orator, argues upon the destiny of man and the sinfulness of human nature, and teaches the necessity of education for the attainment of moral and intellectual strength and the capacity for perfect liberty.

§ 5. Quintilian's theory, however, is more conformable to the individuality of the Roman character, —*viz.*, that the education required to produce an orator must be the education necessary to produce a perfect man. This idea he held in common with Cato Censor, whose work, he says, was the first scientific treatise on the formation of an orator. Quintilian's advice to parents and teachers is well worthy of our consideration; and the principle with which he commences,—*viz.*, that "a father, as soon as his son is born, should conceive, first of all, the best possible hopes of him;" for that "among boys good promise is shewn in by far the greater number of instances, and if this passes off in the progress of time, it is manifest that it was not natural ability, but care, which was wanting,"—is a principle of no little practical value. This hope will naturally render the parent more solicitous about his son's improvement, at the very outset; and he will take care, even in the selection of a nurse, to choose one whose language, as well as manners and morals, will fit her to be a proper example to his child. Quintilian points out the necessity of as much learning as possible, not only in the professional instructors of children but in parents also; for there are many duties, not properly included under tuition, to be discharged towards children, which it is impossible for the unlearned fitly to perform. Aristotle, as we have seen, considered it to be unnecessary to teach children anything for the first few years of their lives: Quintilian, however, is of a contrary opinion, and agrees with Chrysippus, that no part of a child's life should be exempt from tuition. "Let us not lose," he says, "even the earliest period of life; and so much the less, as the elements of learning depend on the memory alone, which not only exists in children, but is at that time of life even most tenacious." He is fully alive, however, to the necessity of dealing gently with childhood, and of conveying instruction as much as possible under the form of amusement, and of taking every care to prevent the child from conceiving a dislike to that application which he cannot yet love. Thus, he quite disapproves of the method of compelling children to learn the names, and position in the alphabet, of the letters, before they are acquainted with their shapes, and proposes the use of ivory figures of letters, as play-things, in order that they may become accustomed to their forms. It appears that "the accomplishment of writing well and expeditiously" was as much "disregarded by people of quality" in Quintilian's day as it used to be among ourselves; and he therefore counsels those who have the charge of children by no means to allow them to neglect this acquirement. He is very careful also to point out the danger of hurrying children on too much in their efforts to read; for from too great haste can only "arise hesitation, interruption, and repetition, as they will attempt more than they can manage; and then, after making many mistakes, they become distrustful even of what they know. Let reading therefore be at first sure, then continuous, and for a long time slow, until by exercise a correct quickness is gained." He furthermore insists upon a due attention to what might be called trivial matters in the education of the young, and requires that even the lines set as writing-copies should not contain useless sentences, but should be such as convey some moral instruction. For it is quite true that—as he says—" the remembrance of such admonitions will attend the child to old age, and will be of use even for the formation of his character." Quintilian was himself a professor in a public school, and he discusses at length the comparative advantages and disadvantages of public and private education: he, however, gives his preference to the former, and supports his position by many arguments. For one, at any rate, who is destined to take any part in public affairs, it is absolutely necessary that he should not pine away, or allow his mind to rust in retirement; but should learn to measure himself with others. " At home, he can only learn what he is taught himself; at school, even what is taught others. He will daily hear many things commended, many things corrected; the idleness of a fellow-student, when reproved, will be a warning to him; the industry of any one, when commended, will be a stimulus; emulation will be excited by praise: and he will think it a disgrace to yield to his equals in age, and an honour to surpass his seniors." In conclusion, he enforces the great importance of properly ascertaining the disposition and abilities of the pupil, and of managing him accordingly; not by corporal punishment, to which Quintilian was most thoroughly averse; but by taking advantage of the characteristics of mind which he displays:—and advises always the selection of the best teacher whom it is possible to obtain, even from the very first, since such a one "can teach little things best, as well as great ones." His course of study appears to have been unrestricted; he gives it as his opinion that not only the poets, but every class of writers, should be studied—not simply for matter but for words; and music, astronomy, and philosophy, all enter into the curriculum proposed for the would-be orator.

§ 6. After the time of Quintilian, the Romans began to feel more and more deeply the necessity of supplying their mental emptiness:—they consequently betook themselves to the educational systems of the Greeks, and endeavoured to regenerate their life by a Grecian education of the old school. This we may gather from the appointment of Plutarch* as preceptor to Trajan, as well as from Lucian's opinion of the need of such a regeneration. It could not however be effected by such measures alone.

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* The Author is aware that the fact of Plutarch being appointed preceptor to Trajan rests upon no better authority than that of Suidas, and of a Latin letter attributed to Plutarch, and addressed to Trajan, which in all probability is a forgery. But that he was at any rate in high repute at the Roman court, and was advanced to posts of no mean dignity, seems to be beyond doubt.

8. With regard to the influence of Roman education upon that of our own times, we must allow that the laws, language, and literature of the Romans furnish us with an excellent discipline for the intellectual faculties of our youth, though the adoption of all their opinions on the subject of education would be as impracticable as the adoption of those of the Greeks, and for similar reasons.

9. The introduction of Christianity into the West was the commencement of a new era. When first the Christian Church felt her sublime calling to civilize mankind, her pure intention and the beneficial effect of her working are not to be mistaken. But as time rolled on, and the possession of temporal power began to secularize the Church, and to destroy the spirituality which had once distinguished her, she gradually assumed to herself the sole monopoly, as it were, of enlightenment and learning, and portioned out to the people, in accordance with her own hierocratic principles, just so much knowledge, and no more, as would lead them to render an implicit obedience to her dogmas. The consequence of this was, that in the middle of the fifth century, when the monks were the

sole possessors of learning, education became of too circumscribed a character to be productive of good results. At that period he who had studied the seven liberal arts, *viz.*:—grammar, dialectic, and rhetoric, which were called the *trivium*, and music, arithmetic, geometry, and astronomy, which were included in the *quadrivium*,—was considered a highly educated man: such, for example, was Albertus Magnus; "*quadrivium docuit, et totum scibile scivit.*" This curriculum, poor as it was, exhausted the study of language and of science, and but few went through it.

10. The British seminaries for the diffusion of Christianity and knowledge in the seventh century, the learning and poetry of the Arabians about the same time, the monastic schools of Charles the Great in the eighth century, and the strenuous endeavours of Alfred the Great at the end of the ninth,—all had not sufficient influence to raise the whole body of human society to a higher standard of civilization. Each attempt, doubtless, effected some good; but it was but partial, and scarcely seems to have extended beyond the next generation. And as we advance step by step into the middle ages, we find all classes of men, and even the clergy themselves, becoming more and more ignorant and superstitious, until, about the middle of the eleventh century, a darkness almost total set in and

prevailed over the western nations till the end of the fourteenth.

11. This is a period in the civilization of the world, the history of which has never yet been sufficiently cleared up; for it appears almost incredible that, notwithstanding the power of the Church and its darkening system, and notwithstanding all other obstacles to enlightenment, the many impulses which from time to time were given to awaken the dormant powers of the mind, should have been so totally inadequate to produce any result. And yet almost all historians of that period concur in depicting it in the most gloomy colours. "Men," says Tytler, "like Peter Lombard, Archbishop of Paris, and Abelard, so celebrated for his amours and misfortunes,—whose extensive erudition qualified them for better undertakings than to confound the common sense of mankind by their frivolities and unintelligible speculations,—were the teachers of scholastic learning, which was then judged to be the only pursuit worthy of attention, till the science of the law, from the discovery of the Pandects, at Amalfi, introduced subtleties of another kind; and while the learned were busy disputing in their colleges and cloisters, on law and theology, ignorance and barbarism were drawing their gloomy veil over the rest of mankind."

But, through the thick gloom that prevailed, a few gleams of light were yet visible. Plato and Aristotle were still studied, and the ideas and maxims of the Greeks were therefore still disseminated. The Roman law was the political basis on which society rested, and spontaneous education contained in it elements of great value,—as valour, honour, gentleness, respect towards the weaker sex, and all that constitutes chivalrous feeling. These were the elements which gave life to poetry, and which refined manners, contributing to domestic felicity, and promoting many excellent virtues. But technical instruction must have been poor indeed, since few could even read or write. We are probably not wrong, therefore, in looking upon the dark ages as a period of transition, during which the mind was struggling for light against a thousand obstacles.

12. At length, in the middle of the fourteenth century the darkness which for so long a period had enwrapped mankind began to be dispersed, and an era commenced, memorable for progress in science and art. It was then that Dante, Petrarch, and Boccaccio rekindled a love for the literature of old Rome, as well as for that of their own country; and the learned Grecian fugitives, who, after the conquest of Constantinople by the Turks in 1454, sought refuge in the cities of Southern Europe, found a favourable recep-

tion, especially in Florence, and spread the knowledge and the love of the Greek language and literature. The Greek and Roman authors then became the centre of a higher course of instruction; and the art of printing, which had shortly before been invented in Germany, in the year 1436, greatly facilitated the study of their works, and contributed much to the acquirement of general knowledge and the progress of art and science. Thus the light which was kindled in Italy gradually became diffused over other countries. Germany and the Netherlands were the first recipients of it, and subsequently England and France. The scholars of these countries,—Agricola, Reuchlin, Regiomontanus, Erasmus, and others, drew their learning from Italy, and prepared the way for the Reformation, which, in the Pontificate of Leo the Tenth, when the depravity of morals had outstepped all bounds, reached its culminating point in Luther and Zwingle.

13. The Reformation brought with it the inestimable boon of freedom of conscience and liberty of opinion, and established the important truth, that the responsibility of every man's faith must rest ultimately and exclusively with himself. The influence of this truth immediately became apparent; and it was found necessary that all grades of society, from the highest

to the lowest, should be educated, and that the faculties of man should be developed according to the dictates of reason, and not according to the dogmas of the Papal Church. Men discovered that the earth did move round the sun, notwithstanding all the papal edicts to the contrary; and the trammels of priestcraft were broken through.

14. The question, however,—How is the business of education to be conducted?—was as difficult of solution to the learned men of that day as it is to the philosophers of our own time. We, indeed, are doubtless placed at a great advantage as compared with them, and have at our command a much more extensive stock of the materials of education; while they, having no contemporary literature of their own, nor any other methods of instruction than the old ones to which to resort, were necessarily obliged to fall back upon the much neglected but ever-living memorials of Greece and Rome. The consequence was that the study of the classics became almost a mania, and the acquirement of a knowledge of real things was held to be a matter of secondary consideration, and became subservient to that of words. This partial direction of education at length attracted the attention of several eminent philosophers and statesmen, and, among others, of our own Lord Bacon, who, at the end of the

sixteenth century, proposed to the world a new idea of scientific teaching. It was the method of induction, according to which the mind is directed to obtain a clear conception of things, not from books or words, but from the things themselves as they exist in nature; and the scientific enquirer then proceeds, step by step, to ascertain the laws of nature for himself, and does not trust to established dogmas alone. In consequence of this, verbalism gave place to scientific realism; the perceptive and observing faculties were taught to combine their results with the generalizations of the understanding; and the study of the natural sciences began to claim an equal attention and cultivation with the acquisition of ancient languages and literature.

The philosophy of the ancients was, as we have seen, either too contracted in its aims or too theoretical in its nature, to produce a really beneficial and lasting influence upon the moral, intellectual, and social condition of mankind. Though it speculated much upon the attainment of virtue and happiness, it tended but little to the promotion of true enlightenment and civilization. The Baconian system was, however, essentially practical; and, founded upon the principles of utility and progress, it aimed at nothing but what is useful to man,—at nothing but what may be accomplished.

15. Whilst Bacon was thus endeavouring to establish a new system of education in this country, his contemporary, Montaigne, effected great improvements in the educational systems of France; and, at a somewhat later period, des Cartes and others advanced many new and important philosophical theories. The studies and discoveries of Copernicus, Galileo, and Kepler had already contributed much to the progress of astronomical science; but it remained for the immortal Newton to establish it upon firm and lasting principles. The knowledge acquired by all these eminent men was gained, not so much by means of the symbols, formulæ, and usual technicalities of science, as by the only safe method in the investigation of natural phenomena,—the Baconian system of observation and induction.

16. § 1. In the middle of the seventeenth century Milton regretted the great waste of time in the education of the young, and complained of the wrong done in "spending seven or eight years merely in scraping together so much Latin and Greek as might be learned otherwise easily and delightfully in one year." He proposed, for youths from the age of twelve to one-and-twenty, to find a spacious house and grounds, large enough to lodge about one hundred and fifty persons, "whereof twenty or there-

about may be attendants, all under the government of one head." This place was to answer the purpose as far as possible of both school and university, so that there should be no need of any "remove to any other house of scholarship." With regard to their studies, he advises that, "beginning with the chief and necessary rules of some good grammar," they should pass on to the perusal of the more easy Socratic discourses in Greek; and, in Latin, of the first two or three books of Quintilian, accompanied with such lectures and explanations as may inflame them with a love of learning and an admiration of virtue. At the same time he suggests that, at some other hour of the day, they shall be taught the rules of arithmetic and the elements of geometry; and in the evening, "the easy grounds of religion and the story of Scripture." He then proposes the study of the agricultural authors, —Cato, Varro, and Columella,—"the historical physiology of Aristotle and Theophrastus,"—the Natural History of Pliny, Seneca, and Celsus,—the Greek and Latin poets, philosophers, lawgivers, orators, logicians, and critics, in order; the Italian language; the Hebrew tongue, with the addition of the Chaldee and the Syrian dialects; and whatever in history, or physics, or theoretical or practical science, reading and experience could teach them. His curriculum was an extensive one, but he paid as great attention to the development of the bodily as of the mental powers; and fencing, wrestling, riding, sailing and all martial exercises, whether on land or on sea, entered into his proposed course of education up to the age of twenty-one; at which time, "if they desired to see other countries, not to learn principles, but to enlarge experience and make wise observation, they would be such as should deserve the regard of all, and the society and friendship of those in all places who should be the best and most eminent."

§ 2. Some few years later—that is, in the year 1690—the celebrated John Locke gave to the world his excellent treatise on Education, in which he warmly controverted the then prevalent opinion that it was necessary to the proper development of the mental powers, to bestow the chief part of the time devoted to education upon the study of the ancient languages. "The virtue of the child," he says, "is the first grand object; subsidiary to this, and valuable only as contributing to it, is learning, which is not worth the having if it is to be acquired to the exclusion of every other species of mental cultivation." Commencing with the consideration of the physical health of the young, he gives a number of rules, which, though admirable upon the whole, are nevertheless by no means capable of being implicitly adopted. His recommendation for instance of extreme hardship in the early education of the body, is altogether erroneous. But upon the subject of the mental training of childhood his remarks are of the highest excellence, and well worthy of the most attentive study of all who have the charge of young children. He inveighs strongly against the culpable neglect, which but too commonly prevails, of the minds and dispositions of children during their tenderest years, on the part of those who, either through excess of tenderness or from weakness of judgment, consider it "quite harmless to allow them full licence in any little improprieties they may have a mind to, forgetting that the proportion of the fault to the age is the same, and that by indulgence then, they will come to arrogate to themselves the same privilege, when a riper age shall bring with it desires and passions no longer innocent." Every impression in early years is of lasting importance, and it is impossible for parents to be too careful in guarding their children against falling into habits which, though perhaps innocent in their present results, are pregnant with the seeds of future vice. Awe for his parents, according to Locke, is the first feeling which should be implanted in a child's mind; obedience and respect will then naturally follow, and affection will be easily added to the rest, without endangering authority. But notwithstanding these opinions, he is strongly opposed to all corporal punishment, considering that "ingenuous shame and the apprehension of displeasure are the only true restraint." And so, in like manner, rewards are as pernicious as punishments, except indeed those that act upon the mind, not upon the body; "esteem and affection on the one hand, and shame and disgrace on the other, being the materials to be used to this end.......Obedience is sufficiently secured by a sense of duty and veneration towards the parent, early instilled; yet are children to be reasoned with": they have a pride in being treated as rational creatures; and this pride must be cherished, and made a means of turning them to virtuous courses. Upon the question whether a private or a public education be preferable, Locke decides in favour of the former, as being more conducive to the early establishment of right moral principles; though he confesses that the question is one of much difficulty, and hardly seems confident in the soundness of the conclusion at which he arrives. Our author very strongly advocates the promotion, when the proper time shall have arrived, of mutual confidence between father and son, so that the ties of friendship may succeed to the colder obligations of filial duty: and this, he says, must be begun by the father, who should not hesitate to open his heart to his son, when years of discretion have rendered him worthy of that communication." "Propose matters to him familiarly, and ask his advice; and when he ever lights on the right, follow it as his; and if he succeeds well, let him have the commendation. With respect to learning, Locke "always had a fancy that it might be made a play and recreation to children," and suggests that good games might be invented by means of which to teach them the alphabet; and so he proceeds with the recommendation of letting the child's Latin be made a medium of imparting some entertaining knowledge. Latin and Greek "in moderation," French, Geography, Arithmetic, Ethics, History, and Natural philosophy, pretty well complete the curriculum of study which he proposes; and "fencing, riding, and wrestling, ought to be taught, both for the benefit of health and exercise, and for the power they give." Locke would seem to have been indebted for many of his thoughts upon education to Quintilian; but with regard to music he appears to have held a very different, and a far less philosophical opinion; for whereas the latter does not hesitate to rank it as a most essential and indispensable part of education, the former "thinks that of all those things that ever came into the list of accomplishments, we may give it the last place." The proper season for travelling is, in his opinion, either boyhood, that is to say from seven to fourteen or sixteen years of age, and with a tutor,—or perfect manhood, when a man's own discretion will be for him a sufficient monitor. And lastly, in whatever station of life a man may be placed, he suggests that he ought to be acquainted with at least one trade, not superficially, but by actual practice; as a vent for the superabundant activity of human nature, and a means of diverting it from a vicious direction.

17. The educational views of Rousseau were even still more opposed to the old methods of teaching than were those of Locke. His celebrated work *Émile* contains much that is excellent as regards both moral and intellectual culture; but his system is, in many respects, more ingenious than practicable, though it will amply repay the careful perusal of the teacher.

18. The innovations which, under the influence of the ideas of Bacon, Montaigne, Locke, Rousseau, and others, had effected so great a reformation in the educational systems of our own and neighbouring countries, at length excited the opposition of certain philosophers, who contended that the moral elevation of mankind should be the grand and sole object of

all education, and that this object could be best promoted by subjecting the minds of the young to a profound study of Greek and Roman literature. This humanistic idea of education established it as a principle, that in the training of children their future rank, profession, or occupation should not be regarded, but only the general development and culture of their moral powers. The cultivation of the intellectual faculties of the young was to them a matter of secondary consideration

19. This reaction was naturally to be expected: but at the end of the last century another and a very important change was brought about, in the elementary instruction of the young, by the indefatigable labours of Pestalozzi. The system which he advocated was constructed upon the principle that, since all our knowledge must at first be derived through the medium of the senses, elementary instruction must be conducted by means of real and visible objects. He argued, and very justly, that whereas words are but the signs and symbols of ideas, it is of no avail to store the memory with them, unless at the same time a clear conception of that which is signified by them be also imparted. In the latter part of this treatise we shall see that many and great advantages are to be gained by object-teaching; but it must not

be concluded, as Peslalozzi appears to have supposed, that such a course of training is all that is necessary in early life. It is true that by object-teaching a large number of valuable facts may be impressed upon the mind; but still, something more than this is requisite in order to awaken and call into exercise the nobler powers of the mind, to enable the young to trace the relations, tendencies, and analogies of facts, and thus to prepare them for the proper investigation of cause and effect.

Since the time of Pestalozzi innumerable works on education, of greater or less practical utility, have appeared, the authors of which have advocated so many contradictory opinions and theories, that it is to be feared that the day is yet very far distant which shall usher in the establishment and adoption of a system of education based upon principles universally acknowledged, and therefore universally practicable.

20. By this brief review of the history and progress of education, I have made it my endeavour to strengthen the position which I originally advanced, and to shew the necessity of adapting our mode of instruction to the exigencies of the days in which we live. Education, as I have before said, is a science of experience. The systems which have prevailed at different times may, perhaps, have answered the require-

ments of those times, but they are not suited to the present day. They are temporary, tentative as it were,—nothing more. And so, though we avail ourselves of them so far as they will serve us, yet we have to work out for ourselves a system which will better satisfy our own wants,—just as future generations will, in their turn, have to improve upon our improvements.

In the remaining part of my subject—the defective state of intellectual education—I shall endeavour to point out some of the means whereby the evils to which I have alluded may be remedied; and if some of the remarks which I shall have occasion to offer shall appear trite and common-place, I can only say that, so long as but few out of the numerous class of teachers are found willing to give attention to them, they can scarcely be too often repeated. There are some truths which have to be clothed in many and various guises, and presented in many aspects, before they are received and permitted to exercise a real influence on the mind. They may be tacitly admitted by the understanding, speculatively assented to, and freely confessed to be of value and importance, and yet may fail entirely to gain admission into the heart.

PART IV.

IV.—*On Intellectual Education.*

1. My readers will hardly expect from me a definition of the human mind. Philosophers have indeed often attempted this before now, and have as often failed. While some have ascribed to it an absolute existence, or have deemed it a part of a universal spirit or intelligence, with which it is to a certain extent united now, and will be more intimately reunited hereafter,—others have supposed that it is nothing more than an inherent piece of organized matter, and that it can but exist in connection with it. The nature of the mind, and of the union and relation which subsist between mind and body, the precise period in our existence at which this union was established, the nature of the intercourse of the mind with the external world, and the influence of the latter upon its powers and faculties,—all these are questions

with regard to which we are, setting aside the knowledge which Revelation may impart, totally at a loss. They have occupied the thoughts and tested the ingenuity of many; but the labours of generations have left them as inexplicable as they were found to be by the first cultivators of intellectual science. Knowledge may increase, and has of late years rapidly increased; but there are questions which it is beyond the power of the human intellect to solve, and these are amongst them.

We can, however, still do something; we can trace the working of the powers of the mind; and if we cannot define its nature, we can at any rate follow out, in some degree, its operations.

2. The mind is conscious of its own existence. It evidences this consciousness by its intellect, feeling, and will, or in other words by its intellectual faculties and moral powers. Moreover these faculties and powers can be made the subject of education; for they are not at once perfect, but capable of improvement by the influence of the external world as well as by that of superior minds.

3. It is an indispensable condition to the health and well-being both of mind and body, that all their different powers and faculties should be suitably and habitually exercised. Action is the grand object of

organization. It is a law of our nature universally applicable, and any infringement of it entails a serious penalty upon the transgressor. Thus, if the organs of the body be permitted to rèmain in a state of inactivity, the whole system becomes disordered, and even the structure impaired. Again, if the moral and intellectual powers be not constantly exercised, the result is still more fearful; appetite and passion gain the mastery over reason; and man, immortal man, sinks almost to the level of the brute; his life is either spent in dissipation and debauchery, or frittered away in the vain pursuit of pleasure,—in short his whole happiness in time and eternity is shipwrecked.

Action, however, is not only essential to the preservation of the health of mind and body: it is also the means, and the only means, by which the capacities of each can be enlarged and strengthened. Any muscle of the body subjected to repeated exercise, speedily gains additional power and energy; so, in like manner, by repeated exercise any faculty of the mind, whether moral or intellectual, acquires an increase in intensity of functional power. "The bodily force," says Mr. Simpson, "the senses, the observing and reasoning faculties, the moral feelings, can only be improved by habitual exercise. Custom, habit, skill, address, nay virtue itself, are all the fruits of exercise, and come not without it." This is a great and a most important truth, and one which cannot be too strongly impressed upon the minds of teachers; and yet there is unfortunately no need to shew to what a limited extent, either in mental, moral, or physical training, it is practically acted upon.

Exercise, then, is necessary for the proper sustentation and improvement of the various powers of our nature: we will now proceed to the means whereby the exercise or cultivation of the intellectual faculties may be conducted so as to produce the best results. The remaining branches of the subject, viz., the cultivation of the moral and physical faculties, will be fully treated of in the work to which I have alluded in the preface.

4. By *intellectual education*, then, I understand that series of means by which the intellectual faculties of the mind are cultivated, by a proper exercise and development, upon appropriate subjects, for the purpose of attaining knowledge, and gaining those ideas which are subservient to scientific acquirements and the arts and pursuits of life.

5. In the consideration of the culture of the intellectual faculties, it is usual to arrange them into classes, though I am rather inclined to look upon

them as merely so many developments of one indivisible mind in this or that direction. Roughly, they may be divided into those of intuition, which may be termed the poetical powers, and those of the understanding, or the practical powers. But, for the sake of convenience, I shall follow the usual method, and separate them into the four following classes, viz.:

i. *The intuitive faculties*, including sensation, perception, observation, attention, and memory.

ii. *The representative faculties*, including conception, imagination, imitation, &c., and primitive judgment.

iii. *The knowing faculties*, including arrangement, generalization, abstraction, judgment, combination, and analysis.

iv. *The cogitative faculties*, including reason, induction, reflection, &c.

5. These four classes of faculties correspond respectively to the four stages of development which the intellect exhibits. Thus the first stage, from birth to the age of eight or nine, is that in which the intuitive faculties are principally exercised. The second stage, from the age of nine to about eleven, is that in which the representative faculties become conspicuous. In the third, from eleven to thirteen, the knowing faculties (or the understanding) predominate. And in the fourth and last stage, from thirteen on-

wards, reason exercises the mastery over all the powers of the mind. During all these periods, however, all the faculties exist in the mind in a state of greater or less activity, but they usually become prominent and acquire ascendancy in the order above mentioned. To this order of nature in unfolding the faculties, the teacher should conform all his instructions.

§ 1. It must not be understood from this, however, that, at each particular stage, the corresponding class of faculties must be exclusively cultivated. They are all mutually related to each other, and it is advantageous, therefore, that the culture of one class of faculties should be carried on contemporaneously with that of others with which they have connection. Thus the intuitive faculties should be cultivated together with the representative; the knowing faculties with reason, &c. The study of this connection will amply repay the teacher, and will be the means of suggesting to him many practical rules for his guidance.

6. Let us now proceed to the consideration of the means whereby the faculties of the mind may be fitted for the discharge of their duties. We will commence with those which are the chief characteristics of the first years of life, viz., the faculties of perception

§ 1. The organs of sensation are those wondrous instruments by which the mind within is brought into an intimate relation with the world without. They are the *media* through which the qualities, properties, and phenomena of material objects are presented to the mind in such a manner as to awaken and call into exercise its slumbering powers. The development of these powers commences at an early period of infancy; but it is impossible to say how soon after birth the nerves, which are the means of communication between mind and matter, acquire a sufficient degree of energy and power to convey to the infant mind its first impressions of the external world. Whenever this takes place the mind becomes conscious of these impressions; it perceives the objects which produce them, and intellectual life begins.

In order that the various powers of the body may be enabled to perform their duties, it is necessary to supply the body with the materials of nutrition: so also, ere the mind of an infant can think, it must first be furnished with the elements of thought. These elements can only be received into the mind through the instrumentality of the five gateways of knowledge, —the senses: they must therefore consist of the qualities and properties of material things. The notions respecting external objects which are acquired in infancy are of limited extent, and frequently incorrect; for until experience has enabled a child to unite and compare the various perceptions derived from the organs of sense, it may have a consciousness of the existence of things, and yet form erroneous ideas as to their qualities, properties, and phenomena. Thus if any object,—a ball for instance,—be placed within the range of the visual organ, the child will not be able to form a correct estimate of its distance from him, unless, by a comparison of the perceptions he has gained from the sense of touch, with those gained fram the sense of seeing, he is enabled to judge of its magnitude. In like manner, he will be unable to form an accurate conception of the intensity of a sound, unless he has some knowledge of distance; knowledge which must be gained through the medium of other senses than that of hearing. A right judgment, then, respecting the properties of external objects, is dependent upon the application of a certain number of the senses, and a combination and comparison of the perceptions derived from them.

It is of the utmost importance, however, that the senses should be exercised in a proper direction. Nature has done her part towards this end; she has wisely implanted in the infant mind a spirit of enquiry, a love for and an eager desire after knowledge, an impulse by which the child is incited to ascertain the qualities and properties of the objects with which he comes into contact: and with such an assistance provided for the culture and improvement of the senses, it remains for the parent or teacher so to sustain and stimulate this activity, that the senses may be alive to every object and phenomenon which comes within the sphere of their operation. Unless this be done, unless this invaluable activity be fostered and cherished, it will speedily wither and decay. The early and imperfect impressions of external things, if not corrected, will rapidly become so vague and erroneous, so overlaid and intermingled with impressions equally imperfect, that at length it may be truly said of children whose education has been so badly conducted, "They have eyes and see not, ears also and hear not, neither do they understand." To prevent these lamentable results, to make use of every available means by which the spark of intelligence which nature has kindled may be fanned into an undying flame, to take every precaution against the reception of incorrect impressions—these are among the chief duties of the teacher. I would urge therefore this most important truth, that upon a proper cultivation of the perceptive faculties the intellectual condition of after-life is mainly dependent.

§ 2. It has been previously stated that the powers of the mind are awakened and called into activity by means of the impressions produced upon the senses by the qualities and properties of the objects with which they come into contact. The business of teaching must consequently be commenced by exercising the perceptive faculties in the examination of tangible objects as well as of appearances in nature. The sight should be exercised in the discrimination of form, colour, magnitude, distance, and number; the ear, in distinguishing between different kinds of sounds and their degrees of intensity; the touch, in determining what substances are, by the sense of touch alone, unassisted by that of sight.

Form. An object having been observed for a sufficient length of time to convey to the mind a correct idea of its form, the child should be asked if he can point out or recollect any objects of similar shape, &c.

Colour. Lessons on colour should be conducted in a similar manner. Quickness and accuracy of perception are acquired by the examination and comparison of colours. For instance, a number of slips of paper—say twenty—may be procured, each of which is painted with a different colour. Thus there will be five shades of red, five of green, five of blue, and five of yellow. The slips having been mingled together, the pupil should be desired to collect those belonging to each of the colours, and to arrange them in the order of their shades.

Magnitude. The size of different objects should also be a subject of investigation. A three-feet rule having been put into the hands of the pupil, he should be required to examine the respective lengths of a yard, a foot, an inch, half an inch, &c , and then to delineate on paper, or on a board, his conceptions of particular lengths given to him by the teacher; and he must afterwards be shewn how to test his accuracy by means of the measure. He should next be required to judge of the height, length, and breadth of familiar objects, such as tables, chairs, doors, windows, &c.; and, as before, the correctness of his opinions respecting their dimensions should be proved by subsequent measurement. The eye should also be exercised in determining the relative as well as the actual magnitude of objects: thus, for example, the size of a boy's book may be compared with that of his slate, his slate with the table, &c. The relative proportions of the parts of an object should also be noted.

The elder pupils should be accustomed to judge of the distances of objects from one another, and to observe relations of position. The elements of linear drawing may be taught them with advantage; the properties of lines and angles being thoroughly understood, the pupils may proceed to trace on paper the outlines of simple and regular objects, and afterwards to delineate figures of a more complex character. The exercise of drawing is highly advantageous; it powerfully tends to promote habits of attention and observation, enables the child to form correct judgments of form, magnitude, position, &c., and calls into operation that kind of reasoning which will afterwards have to be exercised on things of greater importance.

Weight. Another striking property of matter upon which the perceptive faculties should be exercised, is that of weight. Children should be allowed to handle the metal weights used in shops,—(of course such only as they can lift with facility,)—and should then be questioned as to the absolute and relative weights of equal magnitudes of different substances. For this purpose it is convenient to procure a few pieces of lead, brass, iron, wood, stone, etc., of similar size and shape. After every exercise of this kind the judgment of the pupils must be tested.

§ 3. In the preceding lessons on objects, the faculties of vision and touch are those which are principally exercised; there is, however, another organ of perception, viz., the ear, the cultivation of which forms an equally important part of early education. The development of the faculty of hearing is effected by the aid of music, singing, and speech. Every sound that we hear in early life tends either to improve or impair the sense of hearing. If the ear of a child be subjected to the impulse of loud and sudden sounds, ere, by graduated exercises, its extremely delicate organism has been prepared to receive shocks of so violent a nature, the function of the auditory nerve may be seriously impaired: indeed there are instances on record, in which the sense of hearing has been thereby entirely destroyed. On the other hand, if sounds be too much excluded, the organ will speedily become enfeebled for want of exercise, and unable to detect those minute differences of sounds, upon an accurate discrimination of which a ready and perfect understanding of whatever may be addressed to the ear is dependent. It is the parent's duty to avoid these extremes, and to take care that this important organ be regularly and systematically exercised by appropriate stimuli. Yet how sadly is this duty neglected! At one time, the child's endeavour to imitate the sounds he hears is considered troublesome and is checked; at another, the ear is subjected to loud and sudden noises, which may so injure its imperfectly matured structure as to cause partial and even total deafness. Music, singing, and speech, as I have before remarked, furnish the most appropriate excitements for the structural delicacy of this wonderful organ: they consequently form an indispensable part of education.

§ 4. The value of music and singing is, in my opinion, much underrated. They are too often regarded as mere luxuries, which, so far as the actual welfare of man is concerned, might be dispensed with. This erroneous idea arises from an ignorance of the many important purposes which these gifts of Providence were designed to answer. They complete the development of the sense of hearing, by teaching the child to discriminate and compare the differences between similar sounds, instantly and accurately. Music, when associated with words, exercises a most beneficial influence on the best feelings and emotions of our nature, penetrating into those deep recesses of the heart, into which words alone would fail to obtain admission. It is thus one of the most useful means of moral culture. It was for this reason that Plato recommended it so strongly in his system of education; and another old writer justly observes that "music may be made a powerful auxiliary in directing the destinies of the human family." Music, moreover, exerts a mysterious power over the whole animal and mental economy; and under its inspiriting influence all the bodily powers seem to perform their functions with greater ease and facility, and to gain an increased capability of enduring toil and fatigue. A familiar example of this is seen in the effect produced by music upon the soldier on march. These are but few among the many advantages to be derived from the use of music,—few, therefore, among the many arguments that might be advanced against its neglect by the educator of the young.

§ 5. I have alluded to speech as one of the most efficacious means by which the sense of hearing may be cultivated. The child should learn by heart a piece of simple poetry, and should repeat it without the book. He should be taught by example to pronounce each word distinctly and harmoniously, and to make use of those inflexions and intonations of voice which the sense requires. This exercise will be found to contribute greatly to the formation of a correct ear; but though it is obvious that a knowledge of the principles of elocution, and of the art of reading and speaking with elegance and propriety, constitute an important qualification in the educator, how rarely is this acquirement possessed! Reading aloud and reciting in the open air—care being taken that the position of the body be erect—are most healthful exercises for strengthening the lungs and expanding the chest; and besides this, the blood is purified and enriched by the large doses of oxygen which are imbibed from the air. I cannot, therefore, help considering that every system of education of which music, singing, and speaking do not form an important part, is extremely defective and incomplete.

7. I have thus shewn, though very imperfectly, the necessity of a proper cultivation of the senses, and the advantages to be derived from it. It remains for us now to consider those faculties of the mind with which the senses are intimately connected. A proper cultivation of the senses obviously includes that of the faculty of attention—that voluntary effort of the mind, without which perception is not the consequent effect of sensation. If the attention be not exercised, impressions from the external world may be made upon the organs of sense, and yet not be conveyed to the mind, or at least not transmitted with sufficient energy to call into operation the retentive faculty. We all see the same things, but we do not all observe them; and very different, therefore, is the amount of knowledge we derive from them. In general, this difference is not to be attributed to an inequality of mental capacity, but rather to the comparative intensity and constancy of the exercise of the faculty of attention. Thus the objects and phenomena, from the investigation of which some men acquire the most valuable information, are passed over without consideration by

others. The power of forming correct judgments in the investigation of any subject is also much less dependent upon original differences in intellectual constitution than is commonly supposed. The relative degrees of correctness of the conclusions deduced from identical facts, by different individuals, are the results of the manner in which the attention has been exercised upon those facts. Much, then, indeed I may say everything, depends upon the formation of habits of steady and continuous attention. Such habits are the source of all success in any pursuit of life, while they lay the foundation both of a moral and an intellectual character. The neglect or insufficient cultivation of this important faculty is productive of the most disastrous consequences. If habits of attention be not formed in early life, habits the most opposed to them—those of indolence and listless inactivity—will arise in their place. The mind, instead of deriving knowledge from every object within the sphere of its operation, will be so occupied "with idle dreams and fruitless fancies," so completely at the mercy of the imagination, that not a single subject will be regarded with that close and individual attention which is essential to its perfect apprehension. The formation of habits of attention should, therefore, be an object ever kept in view in early education. The child should be accustomed to concentrate its mental powers energetically and perseveringly on any subject presented to its consideration, and to contemplate it in all its elements and relations. An extraordinary correctness of judgment will be thus acquired: whereas without attention no study can be carried on with success: words, books, and in fact all vehicles of instruction will be but useless instruments in the hands of the educator. The parent or teacher who knows not how to impart knowledge so as systematically to cultivate this faculty, will most inadequately discharge the duties of his important position.

I have described attention as a voluntary effort of mind. Every object in nature or art, which is the cause of a painful or pleasurable emotion, excites this effort in a ratio proportionable to the degree of pain or pleasure which the object imparts. In order, then, to awaken, direct, and sustain the attention, the judgment of the teacher must be exercised in the selection and application of appropriate stimuli. In early life the mind, like the body, is feeble, and incapable of sustaining the impetus of stimuli of too violent a nature or too often repeated. The excitements of the attention, therefere, must be adapted to the progressive development of the faculties. If they be not thus adapted, the powers of observation, instead of being strengthened and sustained, will be weakened and impaired.

§ 1. Care must also be taken as to the motives by which the child is influenced. The utility of the system of tangible rewards and corporal punishments, so commonly adopted for the purpose of urging a child to diligent application, is very questionable. The promise of a specific reward, or the fear of a threatened punishment, may indeed be a sufficient incentive to exertion; and yet the prize to be attained, or the pain to be avoided, may exercise such a paramount influence upon the thoughts as to render impossible a right employment of the means by which, and a right application of the object for which, the lesson is learned or the task accomplished. If these be the motives by which the young are stimulated, their attention will receive an improper direction, viz., to the thing to be attained, and not to the means of attainment. The results of this system, however, are not merely of a negative character, but they have a tendency extremely prejudicial. The pupil who is impelled to learn a lesson by the fear of punishment cannot possibly acquire a taste for study, nor will he ever voluntarily apply himself to it. Every thing connected with study will rather excite emotions of dislike and disgust; the idea of school will be associated with pain and unhappiness, and the child will regard the teacher as his greatest enemy.

Again, when the desire of the attainment of a specific reward is the motive by which the young are incited to application, the results are equally objectionable. Success in any endeavour will merely bring with it that fleeting pleasure which the acquirement of a promised reward produces: while that infinitely more pleasurable feeling, which is derived from a successful employment of the faculties, than which there is not a more powerful stimulus to future exertion, will not be experienced.

Such powerful appeals to the feelings, moreover, are in an immense majority of cases entirely unnecessary. I admit that there are a few instances in which, owing to great peculiarities of mental constitution, this system may be employed with advantage. These instances are, however, of but rare occurrence, and are consequently a most insufficient ground for its general application; and I would now bring under the notice of the reader those means of exciting the attention of children, which have, as it appears to me, a much more healthful tendency.

§ 2. As the minds of the young are differently constituted, it is of course impossible to lay down a method of cultivating the attention exactly appropriate to the requirements of all. A careful study of the dispositions, temperaments, and capacities of children can alone enable the parent or teacher to make use of those stimuli which are exactly adapted to minute differences in intellectual constitution. One of the most powerful of these stimuli is the approbation of the teacher, which will be found in general to be a sufficient incentive to diligent application. The good opinion of others affords a peculiar pleasure to the minds of the young, and the parent or teacher should never fail to bestow commendation where it is deserved. However difficult and laborious a task may have been, a few kind words of approval will be ample compensation for the toil undergone in its accomplishment. The child who has but once experienced the feeling of which I have been speaking will desire its renewal, and that desire will be the means of securing his attention to the subject he is required to study.

§ 3. Another valuable auxiliary for creating and sustaining the attention is sympathy. Nature has implanted in the human mind a desire not only to experience the same emotions which are experienced by others, but that others too shall share in the same emotions by which it is itself affected. The child, therefore, must be led to feel that a real interest is taken by his instructors in his studies; and by these means both the desire to learn and the pleasure of acquiring knowledge will be materially increased. But if he shall perceive that his parents and teachers regard his studies with indifference, or look upon them as irksome tasks, he will consider them in the same light; a lasting antipathy to learning will be thus engendered, and his mind will be closed for ever to the sweet and ennobling influences of knowledge.

§ 4. But although the approbation and sympathy of the teacher are most powerful auxiliaries in cultivating the attention, even these may fail, unless the subject to which he directs that attention be adapted to the intellectual capacity of the pupil, and unless it be presented to the mind in such a manner as to excite and sustain his interest in it. As it is evident that the more fully a child understands the meaning of words, the more easily the teacher will create an interest in any subject through their instrumentality, it follows that, in the explanation of a subject, the simplest language must be used, and care must be taken that the exact meaning of every word be clearly apprehended.

8. The cultivation of attention is of great importance, also, on account of the influence which it has upon the memory. The power of retaining the impressions of facts or ideas, and of recalling them to

the mind, varies in proportion to the energy with which those facts or ideas originally entered the mind, and to the power of the faculty of association. All means, therefore, which tend to stimulate the attention, so as to give strength, clearness, and vivacity to first impressions, must also tend to strengthen and improve the memory. An illustration of this statement,—namely, that tenacity of memory is dependent upon the force of the first impressions, may be seen in the fact, that we all remember with greater distinctness many of the events which forcibly arrested our attention in early life, than those which occurred at a more recent period; and we frequently meet with aged persons, who can relate with wonderful minuteness of detail circumstances which transpired fifty, sixty, or even seventy years ago, while others, which took place on the preceding day, are totally forgotten.

§ 1. The power of recollection is also modified in a great degree by the power of association. The influence of association on the memory, as upon nearly all our mental operations, is very remarkable, and demands the attentive consideration of the educator. By the principle of association two or more facts or ideas, which have been contemplated simultaneously or in immediate succession, become so intimately connected, that the recurrence to the mind of one of these facts or ideas recalls the others with which it is associated. There is also another kind of association by which a particular thought that has arisen in the mind suggests another to which, though not previously connected with it, it has a real or fictitious relation. This second idea suggests a third, the third a fourth, and so on. This process of "simple suggestion," as it has been termed by Dr. Brown, may be carried on to any extent; and we may be unable to discover any affinity between the first and last idea of the series, unless we can retrace each successive step of the process.

The trains of thought which arise in the mind are for the most part dependent upon the nature of the subjects to which the mind has been habitually directed, and upon associations that have been previously formed in connection with them. There are, however, certain principles of analogy upon which associations are formed, which it is customary to refer to three heads, viz., cause and effect, contiguity in time and place, resemblance and contrast. Perhaps of all associations, those of cause and effect produce the most lasting impression upon the memory. They are formed by the youthful mind with peculiar facility. Thus, light and heat are readily associated with the presence of the sun; ice and snow with the cold of winter; rain with clouds, &c. Some of the associations referred to this head are of a most instructive nature; such for example as virtue and happiness; vice and misery; application of the mind with acquirement of knowledge; industry with wealth; extravagance with poverty, &c. Here also the education of children must be progressive. In storing their minds with associations, the judicious teacher will proceed from the simple to the complex, and will endeavour to impress these associations upon the memory by means of familiar illustrations and simple experiments. Local associations, or associations which may be referred to contiguity of time and place, although of less importance than those which have been described, must not be neglected in the cultivation of the memory. By means of these principles of association many valuable facts and ideas may be impressed upon the minds of the young: the greatest care, therefore, must be exercised to prevent the formation of incorrect associations, so that only those facts and ideas may be connected which have a rational relation to each other. Thus, for example, in teaching history, the attention of the pupil should be directed to all the most important events which occurred at one particular period; and by these means, in consequence of the law of association with respect to time and place, each of those events will be readily retained by the memory.

A great variety of associations may also be referred to resemblance. Objects, facts, and events become associated by producing in the mind resembling ideas. Thus the face of a person we have never before seen may suggest the conception of a relation or friend; or a scene we behold for the first time reminds us of one with which we are familiar. In like manner the recollection of a certain fact or event recalls other facts or events to which it bears a resemblance.

Associations are further formed by contrast, as well as by resemblance, and dissimilar objects or conditions suggest one another. Thus the sight or conception of a wolf may suggest the idea of a lamb; the conception of a giant that of a dwarf. When we behold a bird imprisoned in its cage, our thoughts immediately follow it through the pathless air; or if we visit an old baronial mansion in a state of ruin and decay, its lofty halls unroofed and untenanted, the spectacle will not improbably call forth a conception of the same building in the day of its grandeur, when its courts were thronged with "noble knights and ladies gay," and resounded with the hum of voices that have long been silent in the tomb.

The associative power of resemblance and contrast is useful in cultivating both the memory and judgment of children. It would be easy to enumerate examples of the various ways in which this power may be rendered available; a few, however, will suffice.

In the explanation of natural phenomena, a variety of simple experiments should be exhibited, in order that the ideas conveyed by them may be combined by the law of resemblance, and correct conclusions be deduced by the judgment. So, too, with regard to the formation of associations of contrast. Good and evil, right and wrong, honesty and dishonesty, &c., should be contrasted by the teacher in the most forcible manner; the advantages arising from virtuous habits should be compared with the ruinous consequences of vicious ones; a life spent in the employment of the faculties upon objects and pursuits truly worthy of their regard, with a life wasted in indolence or trifled away in waking dreams and vain delusions.

§ 2. The correctness, vivacity, and permanence of associations formed in the mind of a child, entirely depend upon the degree of attention primarily bestowed upon the objects, facts, ideas, or events to which the mind has been directed; and, in like manner, the degree of attention is in proportion to the interest excited. It is evident, therefore, that in all his teachings, it is the master's duty to take the greatest care to awaken and sustain the interest. By so doing he will at once contribute to the improvement both of the attention and of the memory. In general this important point is altogether disregarded. It too often happens that the memories of children are exercised almost exclusively upon words, which, as I have before had occasion to remark, are merely the signs of ideas, the symbols by which associations are recalled; while the teacher takes no trouble to ascertain whether the objects, facts, events, etc., to which they refer, be fully apprehended. The only thing gained by the child, who is the subject, or I may say the victim, of such an irrational method of teaching, will be an increasing distaste for instruction.

§ 3. Again, the indolent or ignorant teacher compels his pupils to repeat, time after time, lessons which, either from the improper manner in which they are presented to the mind, or in consequence of their being of too complex a nature for the intellectual capacity of children, are totally unintelligible, and, therefore, wholly devoid of interest. It is true that nothing so much strengthens the memory as repetition; if, however, the lesson so repeated be not understood, the repetition of it will be an effort purely mechanical, and consequently, as regards the acquirement of knowledge and the improvement of the mind, it will be vain and purposeless.

§ 4. This error of addressing instruction exclusively to the memory, while the other faculties of the mind are not called into operation, is one of the greatest and most prevalent errors. Teachers are apt to overlook the fact that nature has assigned to each of the faculties a certain office in the mental economy, and that consequently it is the part of the educator so to train and cultivate each of those faculties as to enable it to perform its duties in an efficient manner. If, therefore, the memory or any one of the faculties be unduly exercised, it will impede the operation of others, and thus the harmony of the mind will be destroyed. The more easily knowledge is retained by the memory of a child, the more need is there for the exercise of judgment on the part of a teacher in directing his pupil's acquirement of knowledge; for if the memory be improperly exercised, the reasoning faculties will thereby be weakened and impaired. Thus it not unfrequently happens that those who are endowed with an exceedingly strong, capacious, and retentive memory, are greatly deficient in judgment: indeed the most powerful memories are sometimes found in persons whose minds are but little removed from idiotcy. That a powerful memory is by no means essential to a powerful intellect, is apparent from the fact that, in every department of philosophy the most important discoveries have been made, the grandest achievements performed, by men whose memories were by no means the strongest. Not, however, that I would be understood to consider a strong memory to be incompatible with great power of judgment, since there is much evidence in support of a contrary opinion. Thus we are told that Sallust could repeat any line of Demosthenes, and Drusus, the whole of Homer; that Cyrus knew the name of every soldier in his vast army, and Themistocles, that of every citizen of Athens, a city of twenty thousand inhabitants. The amazing strength and capacity of recollection exhibited by these celebrated individuals is a sufficient proof that a most powerful memory can co-exist with a most vigorous judgment. Still in these instances the memory was not cultivated exclusively, but conjointly with the other faculties; and it is upon this condition that I admit the value of a powerful memory. Thus cultivated it enlarges the sphere of the judgment, and forms a broad and solid basis for those influences which alone can render knowledge desirable. I therefore repudiate, and would gladly see abolished, that absurd system of education which bestows its care upon this faculty alone, to the entire neglect of other important faculties, without a proper development of which, memory, however powerful, is of no real value.

9. Having thus offered a few suggestions for the guidance of the teacher in cultivating the intuitive faculties and the memory, I shall now briefly consider the representative faculties, especially those of conception and imagination.

10. The cultivation of the formation of conceptions should be carried on conjointly with that of the perceptive faculty. It is well known that conceptions of things are formed in the mind long after the removal of the object by which impressions on the organs of sensation were produced. Objects, therefore, having been examined in the manner described above, *(see page* 78*)*, should then be removed from sight, and the pupils should be required to describe their colour, form, magnitude, and other properties. They should also be asked to what uses they conceive that an object may be applied; their opinion should be corrected, and the relation between the characteristics of a body and its uses carefully pointed out. As I have said before, in the case of memory and attention, so in like manner the vividness of our conceptions of objects, scenes, and events, is in direct proportion to the intensity of the emotions at first excited by them. Emotions of a pleasurable kind are peculiarly favourable to the exercise of the conceptive faculty; and lessons on the following subjects, if properly con-

ducted, are well calculated to excite and sustain these emotions :—

Astronomy, comprehending interesting and intelligible facts respecting celestial phenomena.

Geography, comprising a graphic description of distant countries, as well as of any peculiar manners and customs of the inhabitants.

Chemistry, accompanied by simple experiments illustrative of the wondrous transformations effected by the principle of chemical affinity, etc.

Lessons in *History*, too, are eminently calculated to improve this important faculty—by which, I mean not merely an epitome of births and deaths, a chronological table of battles and treaties, but history, which depicts in vivid colours those truly notable incidents and discoveries by which the civilization of a country has been promoted.

Natural History is also a valuable instrument in the culture of conception; and yet how seldom is it included in the educational curriculum ! And even when it is taught, in the great majority of cases it is taught injudiciously. Instead of accompanying his pupils to the woods and fields, and directing their attention to the character and structure of the various objects with which they come into contact,—trees, plants, flowers, rocks, etc.,—the teacher condemns them to pore over a ponderous nomenclature of technicalities which are speedily forgotten, and which only serve to create an aversion to the study of the objects to which they refer.

11. The power, then, of forming vivid and accurate conceptions is a highly important acquisition ; and it is impossible to take too much care that the foundation of it be laid in clear and distinct perceptions ; for if, at an early period of life, imagination—of which I shall now speak—gains such influence as to call off the mind from observation, very injurious effects may be expected to follow. Much has been urged both for and against the cultivation of the imaginative faculty, and in general the supporters of either opinion have restricted themselves too much to a one-sided view of the question at issue. While some have ascribed to the culture of imagination an undue influence in the formation of the moral and intellectual character, others,—and they include the majority of educators,—have contended that the frequent exercise of this faculty tends to impart to the young distorted views of things ; and that their minds become so accommodated thereby to visionary extravagances, as to be completely disqualified for the stern realities and important pursuits of life. The methods of teaching, respectively adopted by the advocates of these theories, are equally injurious.

The imagination, like every other faculty of mind, has been designed by the Creator to be the means of promoting the well-being of man; and like all other endowments from on high, it must be used and not abused. The sound and proper exercise of it may be made to contribute to the cultivation of all that is virtuous and estimable in human character. It is a great promoter of human activity and industry. It creates in our minds a conception of the advantages to be derived from the acquisition of some attainable good, and thus it prevents us from resting satisfied with our present condition of knowledge and virtue, and urges us continually to renewed exertions in pursuit of something higher and nobler. It is, moreover, necessary to the production of some of the best emotions of our nature. By it a reflection, as it were, is imparted to the mind, of the joys, sorrows, fears, and necessities of others; and in this way it excites our sympathy and stimulates the benevolent affections. It tends to engender such feelings and emotions as will issue in those mutual acts of kindness by which the ties of friendship are strengthened, and the harmony of society sustained.

§ 1. I believe, then, that the imagination, though not capable of exerting so powerful an influence on the mental and moral constitution as some have asserted, is nevertheless a most powerful auxiliary to improvement. But in order that it may be capable of performing its appointed duties in a proper manner, it must be carefully trained and regulated; and perhaps there is no faculty of mind, the cultivation of which demands such skilful management and vigilant supervision. The wanderings of imagination, so much to be feared, are, in general, not so much the result of an undue cultivation of this faculty as of the want of cultivation of it altogether. If the imagination be left to its own guidance, if it be allowed to exercise itself without restraint upon any subject that enters the thoughts, the greatest injury will be done to the other faculties. The powers of perception will soon become enfeebled, habits of attention will not be formed, and the reasoning faculty will be impaired. If this tendency of the mind to wander be not checked in childhood, in after-life it will give rise to the most serious evils. The mind will become so much the slave of every incidental association, that no pursuit will be followed with that steady perseverance and undivided attention, by which alone success can be achieved. How, then, can the imagination be so cultivated, that it may rather contribute to, than hinder, the due development of the other faculties?

§ 2. The secret consists in surrounding the child with objects and scenes, the contemplation of which will tend to ennoble the mind, and in removing all such as are calculated to excite desires which can never be realized, or are suggestive of pleasures which can never be enjoyed. If this be true, it is obvious that access to works of fiction must be sparingly granted. I cannot better express my own opinion in regard to the effects produced upon the mind by fictitious narrative than by quoting from a writer of high authority.* "Without entering minutely upon the merits of this controversy, I think it may be contended that two evils are likely to arise from much indulgence in works of fiction. The one is a tendency to give way to the wild play of the imagination, a practice most deleterious both to the intellectual and moral habits. The other is a disruption of the harmony which ought to exist between the moral relations and the conduct,—a principle of extensive and important influence. In the healthy state of the moral feelings, for example, the emotion of sympathy, excited by a tale of sorrow, ought to be followed by some efforts for the relief of the sufferer. When such relations in real life are listened to from time to time without any such efforts, the emotion gradually becomes weakened, and that moral condition is produced which we call selfishness, or hardness of heart. Fictitious tales of sorrow appear to have a similar tendency;—the emotion is produced without the corresponding conduct; and when this habit has been indulged, the result seems to be, that a cold and barren sentimentalism is produced, instead of the habit of active benevolence. If fictitious narratives be employed for depicting scenes of vice, another evil of the greatest magnitude is likely to result from them, even though the conduct exhibited should be shown to end in remorse and misery. For by mere familiarity with vice, an injury is done to the youthful mind, which is in no degree compensated for by the moral at the close." The world of nature offers to our contemplation a boundless store of objects, scenes, and phenomena, more interesting by far than the creations of the most imaginative genius. Nature is the best cultivator of imagination: let the teacher accustom his pupils to regard with attention the wonders she displays. Let him foster with assiduous care a love of the sublime and beautiful. The influence of scenery upon the imagination is very powerful; and a landscape, with all its charming diversity of hill, valley, woodland, and stream,—the heaven studded with countless stars,—the mighty ocean, irresistible in its strength,—the grandeur and majesty of a thunder storm,—are all calculated to produce a real and lasting elevation of mind. Regarded aright, such objects as these enlarge our conceptions of the wisdom, power, and beneficence of the Creator, and afford us additional motives to aspire to higher attainments in knowledge and virtue.

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* Dr. Abercrombie, on the Intellectual Powers.

The teacher, then, should seize every opportunity of pointing out to his pupils whatever in the world of nature is most worthy of regard; care, however, being taken to avoid passing too rapidly from one object to another, lest the impressions produced by the former may be overlaid and obliterated by others.

The influence of art as well as of nature should be made use of, under proper restrictions, in the culture of the imagination; and those teachers are fortunate who possess the means of familiarizing their pupils with well-executed prints, engravings, statues, etc. Children should also be accustomed to the examination of approved architectural designs, and should be shown in what the particular beauty or excellence of a building consists.

12. These, then, are my views on the cultivation of the faculties of conception and imagination. I now proceed to offer a few remarks on the development of the cognitive and cogitative faculties, or, as they are preferably called, the faculties of the understanding.

I employ the latter general term, (though in reality it comprehends all the preceding intellectual faculties), principally with regard to judgment, as the representative of the former class, and reasoning as the representative of the latter.

13. There is no faculty of mind more essential in the pursuit of truth, than that of an accurately discriminating judgment—a faculty upon the possession of which the acquisition of all that can truly be called knowledge materially depends. Those highly important operations of the judgment, viz., the quick and accurate perception of resemblances among diversities, and of diversity in the midst of resemblances, should therefore be exercised in every stage of the intellectual life, according to the degree of development which the understanding has reached.

§ 1. Good judgment can of course only be based upon sound and clear perceptions; it is of the greatest importance, therefore, that the perceptive powers of children should be exercised as early as possible. During the period of infancy, before the meaning of words is understood, there is, however, more to be done in this respect, by allowing a child full scope for its own efforts, than by any attempt on our part to convey direct instruction. An infant intently gazing upon an object, or examining it with his little hands and lips, is as usefully employed as the fondest parent can wish him to be.

§ 2. Before words become the signs of voluntary action, all that can be done is to expose the child to sensations, and to allow them to fix the attention. If possible, let the objects of sense be brought into view under different aspects, and be exposed to examination by the different senses. Afterwards, more direct efforts may be made to develope the judgment; for the acquisition of clear perceptions does not necessarily induce the operations of comparison and discrimination. Clear perceptions are only the foundation of an accurate judgment. As soon, therefore, as children understand the meaning of common words, even though they cannot properly employ them, the faculty of comparison should frequently be brought into exercise. At first the objects of comparison should, as much as possible, be such that the comparison may be suggested by the wants of the case; and this system of instruction should consequently be only employed upon objects which are completely within the grasp of the mind. The teacher will never be at a loss to frame such objects, since the familiar things with which children are surrounded furnish constant materials on which to exercise the discriminative faculty. He must not, however, be disappointed, if the result of his endeavours do not equal his expectations. We are speaking of early childhood, a period at which there is no necessity for our making continual efforts for the development of this faculty; and our care should be rather to avoid all forcing or overtaxing of the child's powers, and to exercise them only upon such subjects as are suitable to their state of progress. So, when children are advancing in age, experience, and knowledge, the study of the various branches of mathematics is one of the best means for the culture of judgment. It accustoms the mind to reasoning, and at the same time teaches it how to check and correct that reasoning at every step. It serves also as a correction to the wild flights of imagination, and gives proportionate vigour to the understanding.

14. Of all the powers, however, with which the mind of man has been endowed, there is none so noble, none by which he is so widely seperated from the brute creation, as the faculty of reasoning. Brutes, with but few exceptions, are as susceptible to impressions upon the organs of sensation as man himself; indeed, as is well known, the senses of many animals are capable of much more extended power than those of man. Animals are also provided with certain mental faculties; and they have a language, either of sounds

or signs, which is perfectly adapted to their wants and necessities. In fact, with regard to his corporeal structure, man possesses no single function of the body which belongs exclusively to him, and would absolutely distinguish him from all other creatures. But with regard to his mental faculties the case is different; and though we may trace in the lower animals of creation evidences of distinct mental actions,—such as are commonly known under the name of *instinct*,—yet we see nothing, in their case, of that suitable union and co-relation of faculties, and the consequent capability of bringing them to a higher degree of perfection, which we notice in the ordinary life of the human race. The highest state of perfection, which the cogitative power of the animal can reach, is still very far below the lowest state of perfection of the same power in man.

Reason, then, is a faculty capable of the most extensive cultivation: if its improvement be neglected, or if it be improperly conducted, the most serious evils, individual as well as social, will arise; in fact, both the moral and intellectual character of a man will, in the majority of instances, be totally ruined.

§ 1. The process of reasoning may, however, be expected to go on successfully, where the judgment has been well educated. This operation begins at a very early period of life; indeed the mental process is often independent of words. The direct exercise of it seems not to be desirable until the mind has acquired some degree of vigour, more especially until the judgment has been tolerably well cultivated, and a considerable acquaintance with words acquired: and there is the less need for this, because in every part of early education, there are circumstances of constant occurrence, of which we can continually avail ourselves, which will serve to bring the reasoning faculty into sufficient exercise and give it a right direction. The reason of the young must therefore be cultivated with the utmost caution, and with a constant regard to the particular stages of intellectual development. The exercise of it, to be beneficial, must be spontaneous. If it be exercised upon the same object for too long a time, or if the mind be required to investigate any subject above the level of its comprehension, serious injury will result to its constitution. Single acts only of reasoning should, therefore, be employed in the early periods of education. Thus, if ever a chain of reasoning be suggested, it should, in fact, be made to consist of single unconnected reasonings in the first place; the links should all be comprehended separately before they are joined together. When a child is far enough advanced to pursue a train of premises and conclusions, there can then be no lack of subjects on which to exercise the reasoning faculty: the mathematical as well as physical sciences will by that time be most appropriate subjects of study, since they abound with simple facts and principles well calculated to arrest the attention, and therefore to excite the voluntary exercise of reason.

§ 2. In teaching the various branches of Natural Philosophy, logical order should always give way to natural order. The actual and visible facts, therefore, which constitute the subject-matter of a science, should be presented to the consideration of children, and explained to them in simple and colloquial language, before they are required to study its technical parts,—the signs, symbols, etc., made use of.

§ 3. The study of the dead languages also contributes much to the improvement of the reasoning faculty: though it should not be pursued, as is the case in many of our colleges and schools, to the neglect of other matters of far greater practical utility. It would occupy too great a space were I to enter into a discussion of the various arguments which have been adduced in favour of an education in which the study of the ancient languages occupies the highest place;

but I am unwilling to leave the subject without briefly adverting to some of the most important of them.

§ 4. It is argued that the Greek and Latin languages are the native tongues of poetry, wit, eloquence, and taste; and that consequently, if we would attain these accomplishments, we must draw them exclusively from the same source. Now all must admit the premises of the argument, but the accuracy of the conclusion deduced appears questionable; since it is impossible to deny that there are other means whereby these accomplishments may be, and are, procured. What is desirable, therefore, is not to abolish the study of dead languages, but to allot to them a less prominent place than that which is at present assigned them as subjects of education. Our own and other modern languages are richer in endowments than the languages of the Greeks and Romans; and, moreover, in them the poetry, wit, and oratory of the ancients have been incorporated with a vast store of elegance, pathos, and criticism, of which the poets and orators of antiquity had no conception. I maintain, then, that the English language, if taught as it ought to be taught, and subjected to a critical and logical analysis, will at least as fully repay the labours of the student as the languages of Greece and Rome. It is quite true that the works of Plato and Aristotle, Cicero, Seneca, and others, contain very much that is valuable and instructive ; that the majestic simplicity of Homer, the elaborate polish of Virgil, and the poetical excellencies of many whose names I leave the reader to supply for himself, have never been equalled in modern days ; that there is very much, in fact, which is good, and noble, and useful, to be learned from the writings of the ancient heathen world : but on the other hand it is also equally true, that many of the authors in constant use in our schools abound with descriptions of scenes, and of characters, and of every species of wickedness, calculated to debase and defile the youthful mind. The degrading and disgusting rites and ceremonies of the foul superstitions of the ancient heathen nations, their vicious mythology, the lewd tales they had to tell of their gods and goddesses,—all these are arguments against the exclusiveness of a classical education ; and I would maintain that, as a means of intellectual training, there is no *exclusive* advantage to be gained by the study of the dead languages; and that the chief benefit which that study confers is that it affords an exercise highly beneficial for the development of the mental faculties, and for the exercise of patience, attention, accuracy, discrimination, and ingenuity. But the experience of centuries has proved that the practical value of the knowledge gained does not bear any proportion to the labour and the time expended upon its acquisition; and that in ninety-nine cases out of the hundred, that knowledge, which has been the result of eight or nine years' toil and drudgery, is forgotten, after school has been left, in as many months.

§ 5. Of course I admit that to professional men, such as clergymen, lawyers, and physicians, a knowledge of the Greek and Latin languages is indispensable; as it is also to all who would understand the literature of the scientific world, or the standard writings of our own or any other tongue. But then, it does not by any means follow that the curriculum of such youths as are intended for the learned professions should be exclusively restricted to the study of classical literature, and that other subjects from which great, if not equal, advantage might be derived, should be totally neglected. Until very lately, however, this system was practised in many of our schools and colleges; and even now, although a change is stealing over us, and there are evidences of the introduction of more liberal opinions at our Universities, as well as at Eton and other great public schools, yet too much prominence is still given to the study of the classical works of the Greeks and Romans, while the sciences occupy but a secondary place. And thus it is by no means a rare case that we meet still, in our age, with a so-called gentleman of education, who knows his Homer, the Greek plays, and Horace almost by heart, who can write Greek and Latin prose with considerable correctness, and versify with purity and beauty,—but who, nevertheless, can scarcely work a sum in compound addition, whose knowledge of mathematics would shame a mechanic, while his general information would raise a smile on the face of a National school-boy.

15. I have now briefly described the means whereby the principal faculties of the mind may be successfully cultivated, and pointed out some of the errors which appear to me to exist in the present systems of education. To the teacher a comprehensive knowledge of intellectual philosophy is of incalculable value. It is to the want of this knowledge, to the utter ignorance upon the subject of mind that prevails amongst the majority of teachers, that the errors to which I have alluded are attributable; for unless a man has thoroughly studied the powers and capabilities of a complicated machine,—unless he has carefully examined the movements of its springs, wheels, valves, etc.,—it is impossible that he can so control and apply those powers as to produce the most advantageous

results. In like manner, unless the teacher has thoroughly investigated the subject of intellectual philosophy,—unless he has attentively studied the laws by which the powers and faculties of the youthful mind (a machine far more complicated than any of human contrivance) are regulated,—it is impossible that he can so cultivate the various principles of our nature, speculative as well as active, so direct and control the mental, moral, and physical powers, as to bring them to that degree of development to which they are capable of attaining—impossible that he can so adapt his method of instruction to the capacities of his pupils, that the great and essential object of education, "the training of mortal immortal, for earth, for heaven,"—may be accomplished.

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